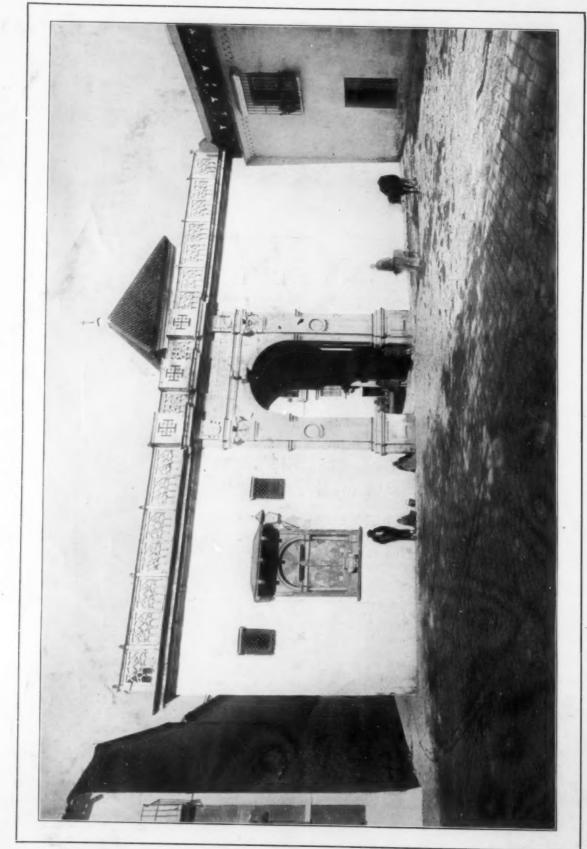
THE BRICKBUILDER.

Vol. 14 JULY 1905 No.

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FROM WORK OF WILLIAM A. BORING, LORD & HEWLETT, McCLURE & SPAHR, McKIM, MEAD & WHITE, WILLIAM B. TUBBY & BRO.

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CASTLE OF PILATOS, SEVILLE, SPAIN.

THE BRICKBVILDER

VOL. 14 No. 7

DEVOTED · TO · THE · INTERESTS · OF · ARCHITECTVRE · IN · MATERIALS · OF · CLAY

JULY 1905

THE BRICKBUILDER.

PUBLISHED MONTHLY BY

ROGERS & MANSON,

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Advertisements will be printed on cover pages only.

THE PRIZE WINNERS IN THE FIREPROOF HOUSE COMPETITION.

WINNER OF FIRST PRIZE.

BEN CORTLAND FLOURNOY, twenty-nine years of age, was graduated in 1897 from Washington and Lee University, and in 1901 took a course in Architecture



BEN CORTLAND FLOURNOY.

at Washington University, Washington, D. C. Some of his engineering experience was obtained in the offices of the Bridge Engineer of the N. Y. C. & H. R. R. R., while most of his architectural experience has been obtained in the offices of the road's Supervising Architect, in which he has been the last five years. Mr. Flournoy recently designed the new dormitory at Washington and Lee University. He is at present connected with the Supervising



HENRY BROOKS PRICE.

Architect's office at Washington.

WINNER OF SECOND PRIZE.

HENRY BROOKS
PRICE, thirty-two
years of age, received
his early training in
the offices of Joseph
Evans Sperry, Baltimore, Md. The years
1895–1898 he devoted
to study at the Ecole
des Beaux Arts and
to European travel.
Since his return to
New York City in
1898 he has been con-

nected with the firms of Howard, Caldwell & Morgan and Warren & Wetmore, besides practising independently. At present he is with Hunt & Hunt, New York City.

WINNER OF THIRD PRIZE.

JOSEPH W. WILSON, twenty-seven years of age, was graduated from the School of Architecture, University of Illinois, in 1903, and as a fellow in architecture received his M.A. degree the following year. Ever since graduation he has been connected with the firm of Nimmons & Fellows, Chicago, I11.



JOSEPH W. WILSON.

Ecclesiastical Architecture.

PAPER V.

THE UNITED STATES.

BY RALPH ADAMS CRAM, F. A. I. A., F. R. G. S.

FEW of the joys of the spirit are more thoroughly pleasurable than the indulgence in vain imaginings as to what might have happened had matters otherwise befallen: if Luther had possessed a more perfect control of his temper; if Henry VIII had been less expensive in his tastes and less expansive in his marital impulses; if Oliver Cromwell had been permitted to emigrate to America when still a young man; if Blücher had failed to come up in time at Waterloo; if Jackson had not fallen at Chancellorsville; if the "Maine" had sailed



ST. MICHAEL'S, CHARLESTON, S. C. A Typical Telescopic Effect.

scathless from Havana Harbor; if Russia had refrained from robbing Japan of Port Arthur ten years ago.

The vistas opened by each supposition are illimitable, and the possible list is practically without bounds. Add yet another: suppose the exodus from England "for conscience' sake" had been dated just a century before. Assume that the revolt had been against the last Henry of the house of Tudor instead of against the first James of the house of Stuart. There was infinitely greater cause, for in the early fifteens a war to the death was going on between the true and the false, the sane and the mad, exponents of the Renaissance. By 1520 the cause of the sound defenders of the "new learning" was already lost, and it was quite evident that the victory would lie with Henry, Cranmer and Crumwell, not with

Archbishop Wareham, Bishop Fisher, Sir Thomas More and Erasmus.

Now suppose that then such pilgrims as these had forsaken a crumbling civilization and come out to preserve in the new world the exalted traditions and principles of mediævalism revivified by all that was good in the Renaissance. Wareham was dead, and Erasmus, before the great débacle, but there were many indeed who would have followed More and Fisher, and what might they not have accomplished? One thing very surely: they would have brought to the new world all the architectural force and fire that



CHRIST CHURCH, BOSTON.
A Note of Thrifty Severity.

were still extant when the sixteenth century began its course, and we should have had here, as our dearest artistic treasures, churches built in the great Christian style, which might by their beauty have proved a bulwark against the subsequent fashions that were to arise in England when the foundations of society had been overturned and art, as an instinct, had ceased to be an appanage of the race.

Well, the exodus was delayed another hundred years. More went to the block, the Benedictine abbots to the



CHRIST CHURCH, ALEXANDRIA, VA.
A Southern Type of the Eighteenth Century.

scaffold and their principles with them. When at last the transfer from East to West was made there was nothing left of the architectural tradition, and the fashion of building that was transplanted to America was that which had been devised by ingenious men as a plausible exponent of the new reign of classical culture.

In the recrudescence some years ago of loud admiration for "Colonial," or, as it should be called, "Georgian" architecture there was, I think, a failure to sufficiently analyze emotions. The building fashion of the seventies and early eighties was of course unendurable, and the frank simplicity and unquestioned good taste in detail of the early eighteenth century work was a welcome relief from the riotous reign of the jig saw. A fine pride in history was coming into being, and we confused archael-



ST. JOHN'S CHAPEL, NEW YORK.
The Full-blown Georgian Type.

ogy and the historic sentiment with artistic assent. The building that had taken place in what are now the United States up to the Revolution was worthy of all respect. It possessed certain elements in its domestic and civil aspects that were sound and true; it was quite as good as, if not better than, what was being done at the time in England, for it was frank and simple and restrained; but this fact should not blind us to that other of equal importance, viz., that the good was due to a dying instinct for good taste, not to the style itself, which really possessed no qualities of sound principle or absolute beauty.

It was all artifice and imitation; many of its best qualities were the result of tricks of memory; sense of scale was curiously persistent, but of feeling for proportion and composition there was little, while the sense of organic relationship had utterly disappeared.

We feel this particularly in the church work of the Colonial period. Little from the seventeenth century



A SURVIVAL FROM THE SEVENTEENTH CENTURY.

remains, - a crag at Jamestown, one or two "Swedish" churches in Delaware, St. Luke's, Smithfield, Va., this last dating from 1632, and retaining a pathetic reminiscence of Gothic in its square tower, stepped buttresses and pointed windows. The churches and meeting-houses of the eighteenth century are legion, but whether they are of the rough country type so familiar to us in the villages of the East and South, of the cautious and thrifty fashion shown in Christ Church, Boston, or whether they approach the elaborate and magnificent, as in Christ Church, Philadelphia, they are all singularly artificial and unimaginative; a square room with galleries on three sides, with or without Corinthian columns of wood, silly entablatures and groined vaults of lath and plaster. Sometimes a massive classical portico of flimsy construction is backed up against one end of the primal cube, and almost invariably an imposing tower, of foolishly diminishing stages, telescopes itself into the upper air. It is the "volapuk" of Wren and Inigo Jones and their school retranslated into the vernacular, nothing much remaining but a very pretty taste in delicate detail and the profound and underlying devotion to economical makeshifts.

With the early nineteenth century came several more educated builders and an influx of spirit from France and England. Latrobe, Thornton, Bulfinch, McComb, Peter Harrison and scores of others did their best to improve

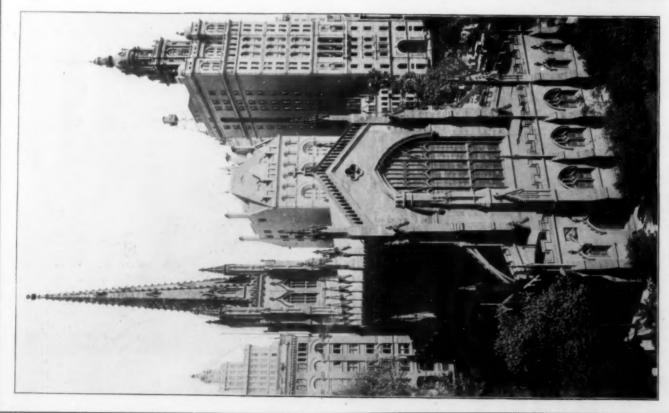


ST. PAUL'S CHAPEL, NEW YORK.
The Cheerful Artifice of Colonial Times.



GRACE CHURCH, NEW YORK.

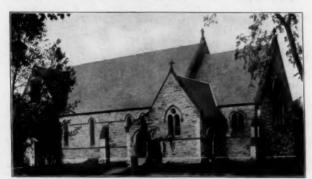
The Renwick Version of the Upjohn Propaganda.



TRINITY CHURCH, NEW YORK.

The Beginnings of Good Gothic in America.

proportions and develop design, though always on the established lines. Jefferson, hot with the new French passion for "pure classic," brought in the most absurd fashion of all, that of copying Greek and Roman temples



T. THOMAS'S, HANOVER, N. H. Gothic in Form and Feeling.

in economical materials and making them do service as Christian churches. It would seem that the reign of pure pretence could go no further, but there was one step, the evidences of which still remain, viz., the building of a clapboard shanty and then applying to the front a ponderous "Doric" portico with pillars four feet in diameter and built up of seven-eighths inch boards nailed together, the whole being painted white, green blinds shading the lofty windows in the slab sides.



GRACE CHURCH, NEWTON, MASS.
A Serious, Thoughtful Effort.

Here we stood about 1835, or lay, rather, prostrate in our total collapse from the days of Ralph of Glastonbury, William of Canterbury and William of Wykeham. Thus far had we fallen from the fifteenth to the nineteenth century; from Gloucester Cathedral to St. Paul's, Boston.

There was no pit of further fall, and radical change was inevitable. The Gothic revival had begun in England under the Pugins, and it promptly found its echo here. I should like to know which was the first church that showed a dawning consciousness of Gothic as the Christian style. St. Stephen's, Philadelphia (1822), Christ Church, Louisville, Ky. (1823), and St. Luke's, Rochester (1824), were certainly amongst the pioneers. So ingrained had become the spirit of architectural deceit and artistic substitution, the first "Gothic" work was just as specious and silly as that which it had come to destroy. The general forms and the materials remained the same, the windows became pointed and took to themselves ridiculous mullions and grotesque tracery of patched-up wood; sharp spikes took the place of balls and urns; shapeless chunks of pine were split out and nailed on all available angles in simulation of crocketing; angled



TRINTY CHURCH, NEWPORT, R. 1.

An Early Hint of Gothicism.

spires took the place of the honored telescope effects. Otherwise there was no change. Honestly, I suppose there is no more awful evidence of rampant barbarism than that which exists in the architecture of the United States between the years 1820 and 1840.

Then came Upjohn, a great man, a sound architect, a leader when the time was clamorous for such an one. Trinity Church, New York, marks the end of an era, the birth of an epoch. Upjohn knew what Gothic meant, he



CHRIST CHURCH, PORTSMOUTH, N. H. Showing a Fine Feeling for Composition.

felt it as an inspiration, he began at the right end and he fixed a style for three generations. Of course nothing he did can be compared in any way with the product of the great thousand years, but the fault was not his. By some miracle he got Gothic feeling into his work and induced the backward public to accept it. From the moment Trinity was built the reign of paganism was at an end.

Also he raised up a line of able disciples that carried on his work year after year: Renwick, who loved French



THE NEW OLD SOUTH CHURCH, BOSTON.
A Good Type of Devoted Study.

Gothic as Upjohn loved English; Upjohn the younger, Withers, Congdon and many others of the same enthusiasm, though possibly less well known. The greater work of these men fails at many points, for it is too studiously imitative, but in their smaller churches there is a frank simplicity, a grave directness, a sincerity and a dominant love for all they did that make such churches as St. Mary's, Burlington, N. J., St. Mark's, Mauch Chunk, Pa., Grace Church, Newton, Mass., St. Thomas's, Hanover, N. H., Christ Church, Danville, Pa., and Christ Church, Portsmouth, N. H., milestones in the progressive development of good architecture in the United States.

So complete had been the downfall of so-called classical methods in church design, so strong and permanently good had been the style developed in its place, it really might have seemed that the day of good building had begun. There was one fact, however, that showed how unstable was the basis on which architecture was building,—the life did not extend beyond the ecclesiastical province. From 1830 to 1880 domestic architecture in the United States became, and continued to be, worse

than at any time or in any place recorded in history, while the public architecture of the time is well represented by the awful output of the government's pet, the late Mr. Mullet. There was no general recognition of the depravity of the situation; here, as in England, a few strong men with Upjohn as leader, had furnished a supply and so brought



THE WEIRD "GOTHIC" OF THE FIRST AMERICAN PRACTITIONERS.

into existence a fictitious demand. I say "fictitious," for the Church was quite as likely to accept a perfectly awful piece of work so long as it called itself "Gothic" as it was to employ Upjohn or Renwick or Congdon. Now the first leaders were getting old; Congdon, Haight and others were still operative, but a restlessness developed, a demand for something new. Just at this crisis came the sudden weakening, both in England and America, which may, I think, be traced in a measure to the writings of John Ruskin. Here was a man of stupefying ability, an extraordinary species of artistic Calvinist, invincibly dogmatic, narrow as Geneva, honest, enthusiastic, inspiring, and quite the worst critic and exponent of architecture that ever lived, but gifted with a facility in the use of perfectly convincing language such as is granted to few men in any given thousand years. Fired by his inflammatory rhetoric, Blomfield, Butterfield and others in England and a particular group in America turned to detail and decoration and the use of colored bricks and terra cotta, stone inlay, naturalistic carving, metal work, as the essentials in con-

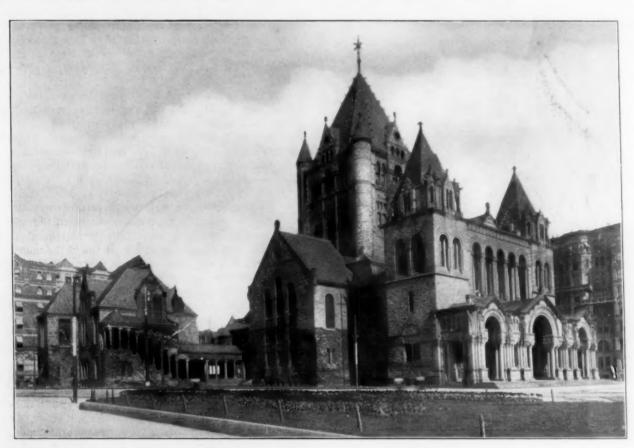


THE ROMAN CATHOLIC CATHEDRAL, BALTIMORE.
The Scholarly Classic of M. Latrobe.

structive art, abandoning the quest for effective composition, thoughtful proportion and established precedents that had characterized the work of their immediate predecessors. Potter, Eidlitz, Sturgis, Furness and Hunt, all began the laudable labor of developing Gothic on new lines, and others followed them — at a distance — as has always been, and always will be the case. To me it seems that of this school John Sturgis alone succeeded to any marked degree; his New Old South Church in Boston, while poor in mass and proportion, being a very remarkable example of the enthusiastic and conscientious study of creative design, particularly in detail and decoration.

he had influenced were weak men,—they are amongst the strongest who are practising to-day,—but simply because his was an alien style, out of touch with our race and time, intrinsically aloof from our blood and impossible of ethnic adaptation. The principles he fought for are established, for they are the universal laws that underlie all good architecture, classic or Gothic. The language in which they were clothed was an accident, ephemeral and transitory.

In ten years we had turned in derision from those who were making a mock of "Romanesque," and the question came, what next? It was promptly answered. While



" AMERICAN ROMANESQUE." The Beginning.

The new work did not meet the demand, however; the movement was discredited for a while both in England and America, and at the psychological moment Richardson burst on the land with his Trinity Church in Boston. He had begun his career on established Gothic lines; suddenly Trinity leaped from his amazing brain, and from that moment the Gothic structure, already toppling dangerously, was doomed to complete destruction.

Richardson was certainly an architect to be ranked with the immortals. He grasped his art with both hands; he devoured and assimilated it as Michael Angelo sculpture, as Leonardo painting, as Wagner music, as Browning poetry. He forged his mighty way across his brief span of years, drawing the continent after him; but when he died the style he had made his own died also, and in ten years it had become a byword, not because the men

we had been toiling over random ashlar, vast voussoirs and cavernous reveals, Bodley and Sedding had been solving the final problem in England, and their revelation was brought to us by several men, chief of whom is Mr. Vaughan. Mr. Haight and Mr. Congdon had held steadfastly to their ideals through the Richardsonian era, as had others. Mr. Gibson came forward with his scheme for Albany Cathedral, and of a sudden sprung as it were out of the ground half a dozen young firms who began to work in Gothic, and think in it as well. Simultaneously another group began to come back from Paris with the new gospel according to the Beaux Arts, but the style they brought with them was so manifestly unsuited for religious purposes that they took no interest in this field of design, which so was handed over in toto to the "Gothic



"AMERICAN ROMANESQUE."
The Beginning of the End.

And so matters stand to-day, the field of architecture unhappily divided into two camps, secular and ecclesiastical, the style of each intolerant of the other and, it would appear, impossible of compromise or amalgamation. Of this "Kulturkampf" and of future possibilities I mean to say a word in the next and concluding paper.



"AMERICAN ROMANESQUE."
The 2 End.

The Fireproof House Competition.

REPORT OF THE JURY OF AWARD.

THE undersigned Committee, having carefully examined the various designs submitted in competition for a fireproof house, of which the programme appeared in the issue of The Brickbuilder for March, 1905, have decided that the First Prize should be awarded to the design submitted by "Vassy" (B. C. Flournoy); the Second Prize to the design submitted under the device of a hollow fireproof block inclosed in a circle and two squares (Henry Brooks Price); and the Third Prize to the design submitted under the symbol of "Tau Beta Pi" (Joseph W. Wilson). Mentions have also been awarded to the four designs by "Fornax" (Gordon B. Pike and William L. Welton), by "Commuter" (Russell Eason Hart), by "Humus" (W. Pell Pulis), and by "Juniperre Serra" (Walter E. Pinkham).

The programme calls for a house, the walls, floors and partitions of which are to be of terra cotta hollow tile blocks, and its expressed object is to encourage ingenuity and resource in the employment of structural clay products in an artistic, practical and inexpensive manner, and to bring out designs expressive of the materials employed.

The design to which first prize has been awarded, while lacking in the interesting study of detail shown in the drawing given second prize, represents a well-proportioned building entirely possible of construction within the limits of cost mentioned in the programme and showing in its detail a logical and pleasing use of the materials available. The simple treatment of the terra cota cornice and its moderate projection beyond the wall, together with the horizontal stringcourse and the treatment of the quoins and arches over the doors and windows, stamp it unmistakably as a burnt clay construction in which the use of stucco has merely been resorted to as a covering for certain portions of the wall and not as a concealment of the structural facts.

The design awarded second prize is the only one which indicates a thorough appreciation on the part of its author of the primary objects of this competition. Both in general design and in detail it shows intelligent study of the decorative possibilities of the rough structural materials prescribed for the building, and from that standpoint it is regarded as the most meritorious of the designs submitted, in most of which the actual structural materials are concealed for the most part by a covering either of stucco or brick. In spite of the fact, however, that it stands alone as a successful solution of the primary objects of the competition, it is so obviously in excess of the cost limitation of the programme, both in size and in the scope of its composition, as to be debarred from consideration for the first prize.

The drawing to which third prize has been awarded, while equally successful as a design for an inexpensive building of this character, fails to give any adequate exterior expression to the materials of its construction. In fact, it might be readily constructed of wood and wire lath. The prize that has been awarded to it, therefore, represents rather an acknowledgment of the general excellence of the design than a tribute to its success in meeting the particular requirements of this competition.

The same remark would apply to all those designs to which mentions have been given, which, moreover, are for the most part obviously in excess of the cost limitation.

It may be added that the design submitted by "Fornax," to which a mention has been awarded, is architecturally the most interesting of all those submitted. In size and general composition it is well within the limits of cost established, but its lavish use of highly enriched "architectural" terra cotta renders it inappropriate under the programme for consideration as a prize design in this competition.

In conclusion it should be said that, while this competition has brought out many designs of considerable architectural merit, the result is, in some respects, disappointing, in that there are but few among them all showing any decided resource in the utilization of materials which are rich in interesting decorative possibilities.

WILLIAM RUTHERFORD MEAD, WILLIAM A. BORING, ARNOLD W. BRUNNER, J. MONROE HEWLETT, JOHN RUSSELL POPE,

Jury of Award.

(Publishers' Note: The designs given mentions will be illustrated in The BRICKBUILDER for August.)

ESTIMATED COST OF HOUSES SHOWN IN THE THREE PRIZE DESIGNS.

[These figures were submitted by the designers.]

FIRST PRIZE DESIGN.

ESTIMATED COST OF CONSTRUCTION.

Excavation	\$50.00
Concrete footings and cellar floor	150.00
Structural terra cotta 4,	218.00
Architectural terra cotta	312.00
Roofing tile	450.00
Rough cast (outside walls) and plastering	550.00
Tile floors in hall, kitchen, pantry and bathrooms	360.00
Metal work, tin roofing, etc	150.00
Structural steel	60.00
Wood framing and sheathing for roofs	350.00
Finished carpentry	300.00
Hardware, painting and glazing	250.00
Plumbing	750.00
Heating	750.00
Total cost\$9	,700.00
Substituting steel framing for wood in roof, add	250.00
Total cost with steel roof framing \$9	,950.00

SECOND PRIZE DESIGN.

ESTIMATED COST OF CONSTRUCTION.

"The cost to build the design herewith submitted, in the vicinity of New York, is estimated to come within the proposed limit of \$10,000.

"This estimate is based on information received by me to the effect that a house of proposed character can be built for from 17 to 18 cts. per cu. ft.

"Also from figures and price lists received by me from manufacturers of proposed material and figures received for interior finish, heating, plumbing and lighting, viz.:"

SHELL:

Outside Walls :

8-inch T.C. Bldg.

Blocks with 4-inch
furring, 3,792 sq.
ft. at 30 cts.....\$1,137.60

8-inch brick with
4-inch furring, 714
sq. ft. at 32 cts... 228.48 \$1,366.08

Floors

Partitions :

Porches

9,596 cu. ft. at 15 cts\$1,439.40

Roof

Excavating

 10,353 cu. ft. at 15 cts
 \$1,552.95 \$6,759.45

 Interior finish
 1,425.00

 Heating
 425.00

 Plumbing
 400.00

 Lighting
 225.00

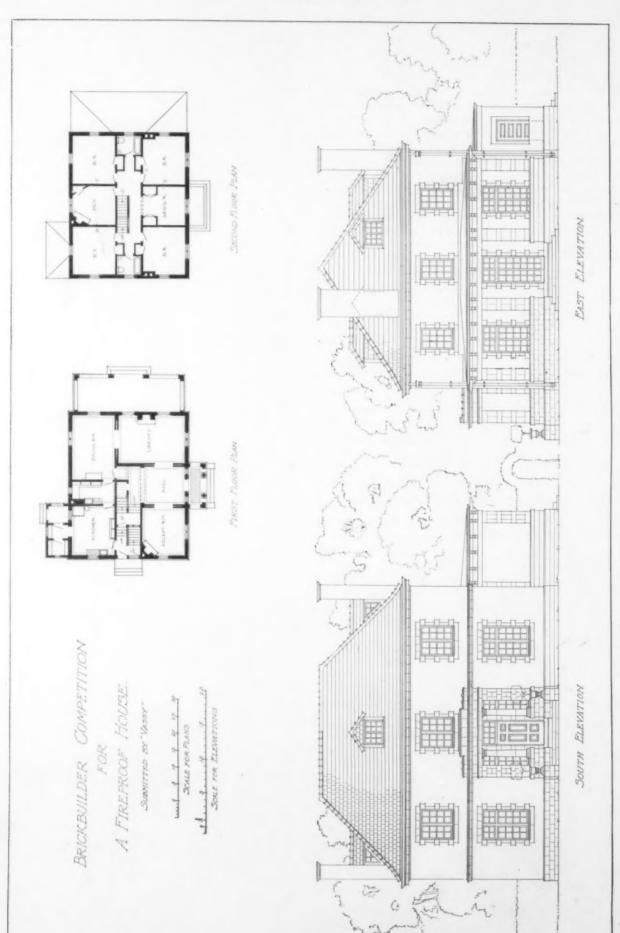
 Incidentals
 765.55

 Total cost
 \$10,000.00

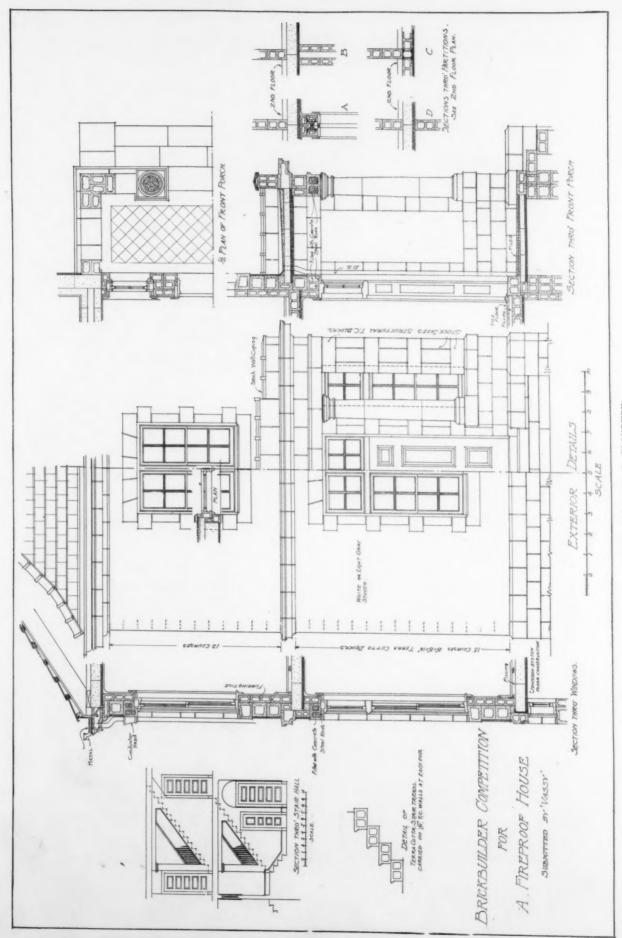
THIRD PRIZE DESIGN.

ESTIMATED COST OF CONSTRUCTION.

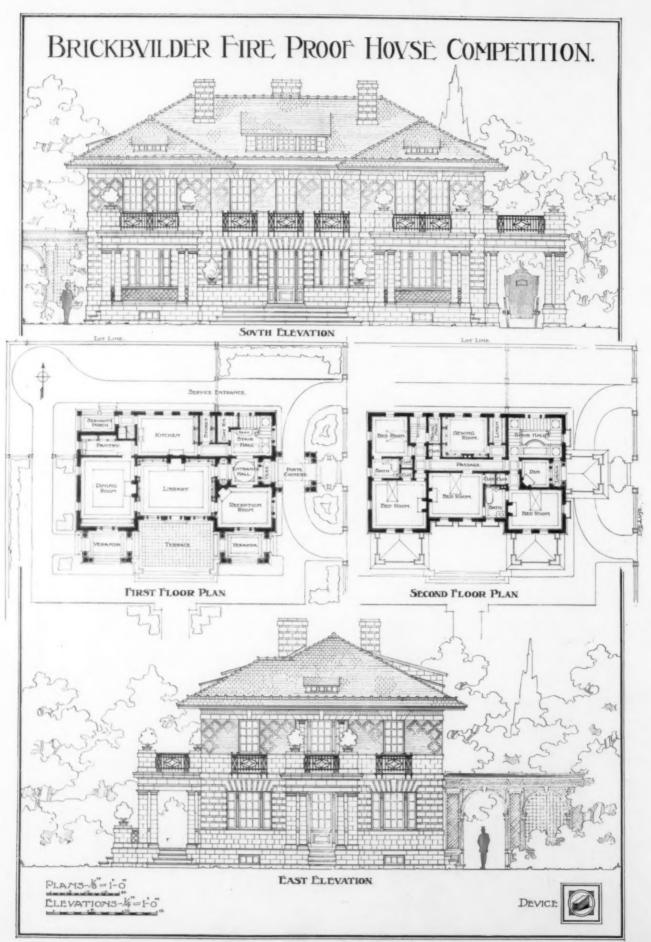
Excavating
Basement floor
First, second and third floors at 20 cts883.00
Outside walls, 1,466.00
Inside walls
Terraces150.00
Plastering outside250,00
Plastering inside553.00
Mill work 2,240.00
Painting and glazing300.00
Metal bar glass175.00
Plumbing980.00
Hardware150.00
Fixtures 150.00
Electric wiring125.00
Heating990.00
Sheet metal and roofing445.00
Roof framing150.00
Total cost



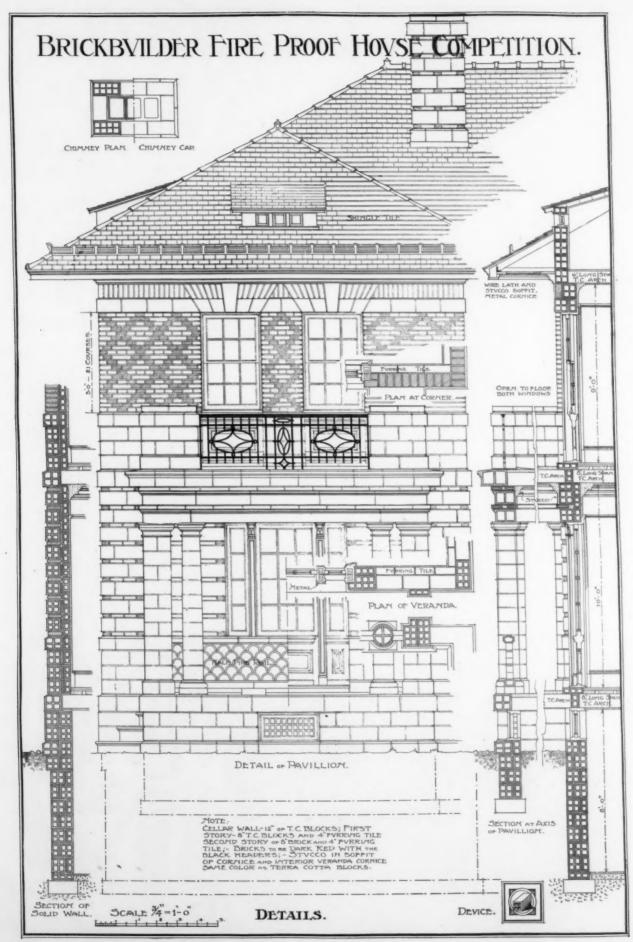
FIRST PRIZE DESIGN. SUBMITTED BY B. C. FLOURNOY, WASHINGTON, D. C.



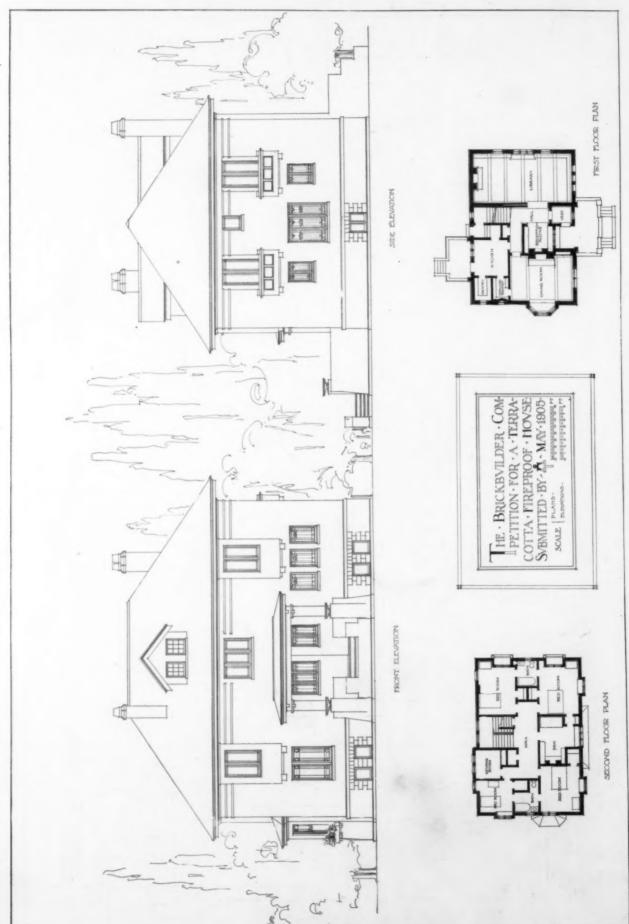
C DETAILS BY B. C. FLOURNOY.



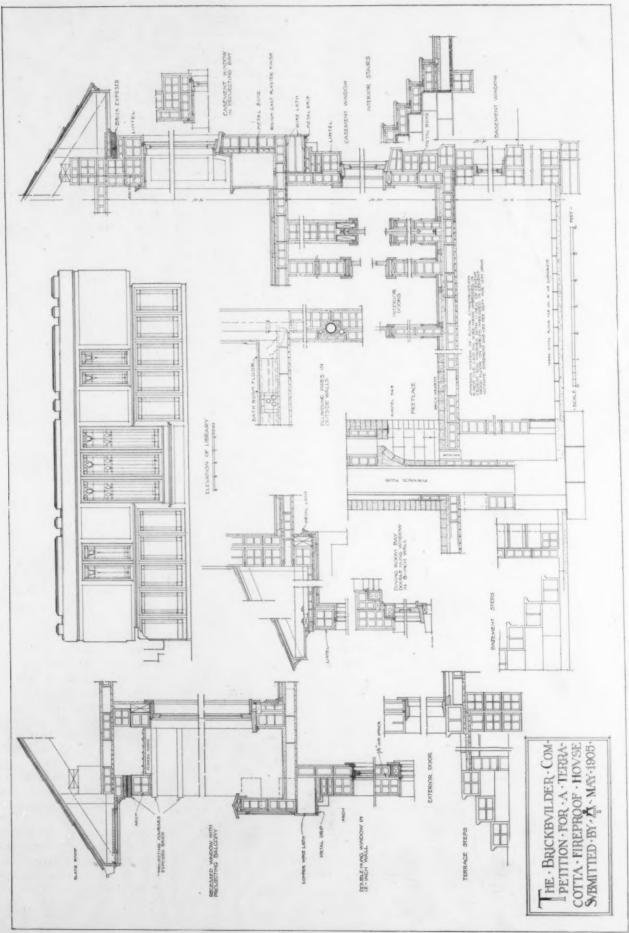
SECOND PRIZE DESIGN. SUBMITTED BY HENRY BROOKS PRICE, NEW YORK CITY.



DETAILS BY HENRY BROOKS PRICE.



THIRD PRIZE DESIGN. SUBMITTED BY JOSEPH W. WILSON, CHICAGO, ILL.



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DETAILS BY JOSEPH W. WILSON.

Tile Work and Faience in England. I.

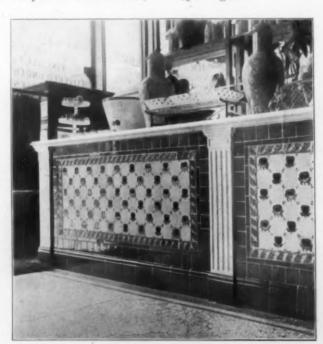
BY R. RANDAL PHILLIPS.

THE finish of walls is a most important consideration in studying the internal appearance of a building, if for no other reason than that the wall is the most con-



TILE WORK IN REFRESHMENT ROOM, SOUTH KENSINGTON

spicuous portion of an interior. Papers of various sorts, burlap and other fabric, none more durable than another, have been ingeniously tried. As a class these are unsanitary; they offer little resistance to knocks and abrasion, the fading power of strong light, the settlement of the building and other deterioration by which silent Time besieges the best of structures. In public buildings especially must these objections be overcome. Marble has been seized upon as an easy way out of the difficulty. But it is a very expensive way; and so far has the use of large sheets of marble been indulged in that there is already a reaction of taste against it. This reaction can be encouraged and is being encouraged by the inventiveness of manufacturers of tile,



2,500 degrees.

TILED SHOP COUNTER.

for in this material alone is there unlimited range for variety, in color effects, differences of texture, of shape; and therewith the joint lines of the tiles themselves go to make a varying but simple form of surface decoration. Indeed we may say, in the face even of progress already made, that the modern craftsman's imagination has just begun to play within the great field of encaustic tile and faience. Both of these have clay as their base. Encaustic tile is made by bringing a pressure of ten to twelve tons upon a mixture of dry clay ground as fine as flour. It is then baked and usually glazed, as otherwise its porous body would absorb dirt or display stains. Vitreous tile is made of feldspar or flint mixed with fire clay and then treated to a temperature of 2,000 or 2,500 degrees Fahrenheit, thus making an absolutely non-porous material. Faience is a term which used to signify the best glazed work of mediæval times, so called from Faenza, the Italian city, which was the home of the craft. The body of this material as it is now known in the commercial world is a fine grade of terra cotta.



transparent, is made to form one body with the base in the baking accomplished by a temperature of about

> Within the last twenty years the use of tiles for wall surfaces and floors has developed enormously in England, by reason of the merits of cleanliness and brightness which tiles possess. In city buildings, especially, requirements of sanitation and light have enforced the employment of glazed materials for numerous purposes; the growth, too, of underground rooms, for restaurants, offices, etc., has created a large demand for tiles of all sorts; while in hotels, municipal buildings, baths and hospitals they are very generally employed as wall coverings.

It is not the intention of the writer to go deeply into the history of this development, but he would draw at-





SEYMOUR WARD, ST. THOMAS'S HOSPITAL, SHOWING PICTURES IN TILES.



A BUTCHER'S SHOP FINISHED IN TILES.



A POULTRY, GAME AND FISH SHOP IN GLAZED THES.



STAIRCASE, FINISHED IN TILES, PRUDENTIAL
ASSURANCE CO. BUILDING.
Alfred Waterhouse & Son. Architects.

tention to a few facts. First, it should be noted that, although in the thirteenth, fourteenth and fifteenth centuries in England encaustic tiles were used to a considerable extent for ecclesiastical buildings, - as may still be seen in numerous cathedrals and abbeys, - for the succeeding two hundred years the manufacture practically ceased, and it was not till the seventeenth century that it was revived by the advent of some Dutch potters who established themselves in Lambeth, now the home of the great pottery firm of Doulton & Co., Ltd. From Lambeth it spread to Bristol and Liverpool, the latter being the center of tile manufacture during the latter half of the eighteenth century, to which period belong the first works of Wedgwood. Other famous potters arose at the beginning of the nineteenth century, such as Minton and Barr, and the industry thus revived became rapidly extended. Of Minton's early work there are some excellent examples at South Kensington Museum, where the refreshment room is carried out entirely in tiles, as the accompanying illustration shows; also in the Ceramic Gallery of the Museum there are ten columns encased with glazed embossed tiles of Minton's manufacture (1868), and the staircase leading to this gallery is similarly embellished.

The mid-Victorian exhibitions gave a great impetus to the industry, and the revival of majolica glazed wares was a further stimulus, Mr. Maw, in

1862, being said to have been the first to attempt the manufacture of majolica tiles for architectural purposes. From that time onwards the use of tiles became general, and when, twenty-five years ago, the sanitary reform of buildings was inaugurated, a new era set in and the advantages of glazed surfaces were specially recognized.

It needs no lengthy discourse to indicate what these advantages are for the lining of such places as restaurants and hotels, where cleanliness is so desirable, and it only requires a glance at the illustrations in this article to see what treatments are possible. In modern hospitals tiles are commonly used for dadoes in wards, with a narrow band or bands of a darker color at top and bottom, and the walls above enamel-painted; while in some of the rooms of such institutions the walls are covered with tiles from floor to ceiling, as in operating theaters and children's wards; an excellent example of the latter is to be seen at the new Belgrave Hospital for Children, in the south of London, and at the new general hospital at Tunbridge Wells (illustrated in The BRICK-BUILDER for August, 1904); and another example, here shown, is to be found at St. Thomas's Hospital, London, executed by Messrs. Doulton. The use of picture tiles for such purposes brings in a most delightful decorative element which is greatly appreciated by the little patients in these wards and the nurses who have charge of them there. Walls

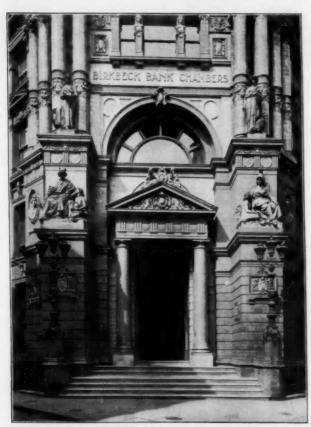


BANKING ROOM, FINISHED IN TILES, PRUDENTIAL ASSURANCE CO. BUILDING.

Alfred Waterhouse & Son, Architects.

covered with tiles can, of course, be washed down and thus kept perfectly clean, and this undoubtedly is one of their chief merits.

In hotels and restaurants, where, for structural reasons, columns are so frequently unavoidable in the rooms, the easy means of encasing and embellishing them with decorative tiles is commonly adopted, as also for the soffits of arches. In banks, too, a similar treatment is employed in many cases, as at the huge new offices of the Prudential Assurance Company, on High Holborn, London, where glazed tile work and faience have been used throughout by the architects, Messrs. Alfred Waterhouse & Son, the work having been executed by the Burmantofts Works of the Leeds Fireclay Company, Ltd. The Birkbeck Bank, close by, affords perhaps the most



TILED COLUMNS AND GLAZED WARE, BIRKBECK BANK.
T. E. Knightley, Architect.

extensive example of the use of tiles and faience to be found in the Kingdom; both inside and outside they are used, all the corridors and halls being completely lined with tiles. The building is a huge example of tile and faience work. Another example of a large building tiled throughout is the National Liberal Club.

For all kinds of shops, tiles are extensively employed, but more especially for dairy premises, fishmongers' and butchers' and other shops where cleanliness is a first requirement. Two examples are here shown (executed by Messrs. Carter & Co., of Poole), as well as an interesting detail of tiles used for the facing of a counter.

These few remarks will suffice to draw attention to the variety of purposes to which tiles are applicable in public, municipal and business premises, as shown by



TILE WORK ON SOFFITS IN ARCHES, ROYAL COLLEGE OF SCIENCE, SOUTH KENSINGTON MUSEUM.

the accompanying illustrations. In a second article a series of other examples will be given, including some in private houses, together with the relative cost of tiles, their manufacture, durability and method of laying.



ROYAL ARCADE, NORWICH, IN CARRARA WARE, G. J. Skipper, Architect.

Boston Brickwork. VI.

COMMERCIAL AND MISCELLANEOUS.

THE remarks which have been made in the preceding articles, on the general character of Boston domestic architecture, apply without great variation to the structures which have been designed for commercial purposes. The only important exception would be that while the representative Bostonian has eschewed ostentation in his private surroundings, he has not been averse to a more lavish display in his places of business, no doubt considering, and most properly too, that such display represents in a measure the commercial success of his concern. As all rules have their exceptions, however, it must be noted that the office structures which have been



MERCANTILE BUILDING, BOSTON.
 Rantoul & Lee, Architects.

fathered by Boston's largest firm of promoters are of a simplicity so intense as to give the surprised beholder an impression of actual weirdness.

Following developments of the city's business buildings through the low gable-roofed structures of the forties and fifties, the red brick and slated Mansards of the sixties, which were so quickly swept away in the great fire of 1872, the iron fronts of the seventies, and the new life and swift growth of the last two decades of the century, one notices first the absence of actual sky-scrapers among the new skeleton buildings. Wise regulations have taken the narrow and winding streets into account and limited the height of any building to one hundred and twenty-five feet, while perhaps less wise ones have further limited heights in certain districts to eighty feet only.

Consequently monstrosities are lacking, and there is a general reasonable feeling of some sort of scale in the relations of the buildings and thoroughfares. Our illustrations show a fairly typical selection among the buildings which make pretence to actual design, although the



MILLER PIANO CO. BUILDING.
 Wm. G. Rantoul, Architect.

class whose elevations betray a primary consideration for the nimble dollar at the expense of the city's beauty are omitted from consideration.

The State Mutual Building, by Andrews, Jaques & Rantoul, is one of the best designed of the modern office structures of Boston. The sandstone and gray brick façades are tasteful and businesslike, and while the detail of the first story (No. 90 is) graceful, it is still sufficiently sturdy to avoid the cyclopean effect which is sometimes supposed to be desirable.

The Penn Mutual Building (No. 94), by E. V. Seeler, has a charmingly designed entrance. The detail above the entrance story is slightly bizarre, but of the sort that one can probably become accustomed to and finally accept.

After an inspection of the small building in Bedford Street, in early Spanish Renaissance (No. 95), built by Winslow & Bigelow, in yellow terra cotta, one feels that Prentiss's Spanish trip was not in vain, for its façades,



 STATE MUTUAL INSURANCE Co.'s BUILDING. Andrews, Jaques, & Rantoul, Architects.



91. MAIN ENTRANCE, TENNIS AND RACQUET CLUB.
Parker & Thomas, Architects.



93. DETAIL, MILLER PIANO CO. BUILDING.
Wm. G. Rantoul, Architect.



92. DOORWAY, TENNIS AND RACQUET CLUB.
Parker & Thomas, Architects.



94. ENTRANCE, PENN MUTUAL BUILDING.
E. V. Seeler, Architect.



95. BUILDING ON BEDFORD STREET. Winslow & Wetherell, Architects.



96. WAREHOUSES, SUMMER STREET. Winslow & Bigelow, Architects.



97. THE LOVAL LEGION BUILDING. Rotch & Tilden, Architects.



98. DELTA BUILDING.
Dwight & Chandler, Architects.



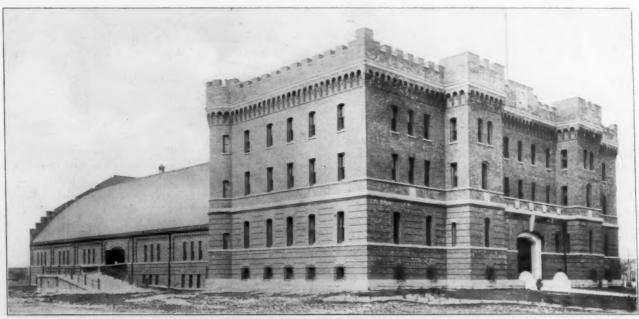
 LAUNDRY BUILDING, CAMBRIDGE, MASS-Herbert C. McClare, Architect.

together with those of the Jewelers' Building, by the same firm, certainly show a high appreciation of his labors. It cannot be the fault of the designer if any detail contained in his book fails of representation in these two structures.

The Delta Building (No. 98), by Dwight & Chandler, has a safe façade of no great originality, and in this it is in striking contrast to the next illustration, which shows the Miller Building, by W. G. Rantoul. The

writer has concluded that this is intended for "Art Nouveau" as it should be interpreted in the States. The long first-story arches and their supports are curiously unstructural and weak, but the side entrance has interesting detail, which appears to have been really studied and not copied from the most convenient book of plates. (Nos. 89 and 93.)

The warehouse (No. 88), by Rantoul & Lee, shows a pleasing and well studied façade, free from strangeness



100. ARMORY, CAMBRIDGE, MASS. Hartwell, Richardson & Driver, Architects.

and likely to live long in the estimation of beholders. One more commercial illustration is appended, being a view of the very substantial and impressive warehouses on Summer Street built by Winslow & Bigelow. (No. 96.) The façades are of light buff brick and the trimmings of black iron.

The Tennis and Racquet Club, by Parker & Thomas, has been previously illustrated in The Brickbuilder and needs no encomiums here. The details of the entrances (Nos. 91 and 92) are worth inspection. The material is red water-struck brick with black headers in panels and patterns and trimmings of white semi-glazed terra cotta. The house of the Loyal Legion (No. 97), by Rotch & Tilden, in very yellow brick and yellow terra cotta, shows a type of Italian architecture which is now but little affected. Nos. 100 and 101 are examples of armories in the military style considered indispensable for such structures. The South Armory (No. 100) is really quite interesting with a well modeled entrance arch and a high tower of pleasing proportions.



101. SOUTH ARMORY. Waite & Cutter, Architects

The series of examples of "Boston Brickwork" closes with this article. A good many buildings of importance have been omitted, some because they have been previously illustrated, some because they are to be illustrated later in the plate forms of The Brickbuilder, some because the type to which they belong is represented by other examples, and some because of lack of general interest.

Boston is essentially a brick city and has been so from its beginning. Knowing the material, with its capabilities and its limitations as well as they do, Boston architects have neither attempted the impossible nor the difficult, but taking brick as it is, they have used it in its proper manner, and keeping it in its natural sphere have produced a type of architecture which, without being striking or sensational, will remain satisfactory and pleasing when labored pyrotechnical façades are exciting only ridicule.

(Concluded.)

Brooklyn Masonic Temple.

LORD & HEWLETT, ARCHITECTS.

DESCRIPTION OF THE PLANS.

A TTENTION is called to the following general points in

Economy of Planning. — The intention has been, first, to reduce the cube to the lowest limit consistent with good proportion of the principal rooms and amplitude of circulation throughout the building; second, to leave as much as possible of the plot available for disposal by sale or for other purposes.

Proper Orientation of Lodge Rooms. — The lodge room floors have been planned to secure an economical disposition with proper orientation and still have ample room for stairs, reception room and other accessories, keeping the building open on all sides.

Architectural Treatment.—The effort has been to obtain a dignified architectural treatment in keeping with the character and importance of the building.

First. By use of an order in classic proportion.

Second. By building on a square plan, enabling an almost exact duplication of the two elevations, each one enhancing the value and adding to the effect of the other, and harmonizing in scale and proportion in a way much more difficult to obtain on a plan just slightly off the square.

To differentiate between the two elevations sufficiently to distinguish the purposes of the building, accentuating by the great single central entrance on Claremont Avenue the importance of the Masonic part of the building (for which the building is of course primarily designed), and accusing by the smaller double entrances on Lafayette Avenue the less important auditorium or public part of the building.

Malerials and Construction. — It is proposed to use steel frame, fireproof construction, finished inside and out in the manner of a first-class office building, the exterior materials being light brick and terra cotta with a six-foot granite base and granite coping wall. If the funds of the Masonic guild permit the use of a more expensive material, an all marble building would be very appropriate.

Heating, Ventilating and Lighting. — It is proposed to use plenum hot blast system with automatic regulation throughout, centrally located; vertical shaft connected with each floor with ducts formed by furring down ceiling of service corridor.

Lighting to be by electricity, incandescent lamps in control from central point in house mechanism space.

General Data.

Attention is called to the following particular points: Cellar. — Arranged so that storage vaults are located in that part of the building which forms by its foundation walls a natural vault and is still accessible by stairs and elevators to upper floors.

Boiler and machinery are located under alley at north side of building, getting light and air from overhead and avoiding the necessity of excavating entire sub-basement.

Basement. — The banquet hall is one great well proportional room, capable of division into three parts, with light and air on two (opposite) sides, affording the best natural ventilation.

The vestibule off elevators and stairs is ample to allow for three separate entrances to banquet hall, for the ready exit and entrance of a crowd, and for billiard room space and passage through the bowling alley under sidewalk, if such is desired.

In regard to the "service": sufficient toilet and coat room space is provided directly off main vestibule, and a band of service is carried across rear of banquet hall, having light and ventilation from alley above and outside entrance to alley at north of building. This serves directly to one or three banquet rooms as desired, and connects by two flights of stairs directly to auditorium.

First Floor. — This floor has been planned to separate the entrance to the strictly Masonic part of the building from the auditorium or public part, featuring the Masonic entrance both in plan and elevation, by its great doorway, vestibule and staircase hall.

The double entrance to the auditorium facilitates the handling of a crowd, while placing the main auditorium entrance on axis with the Masonic entrance vestibule, staircase, etc., makes it possible to open both into one great hallway at such times as the entire building is being used by the Masonic fraternity.

The auditorium is shaped to give the maximum floor area with sufficient space for service, chair storage, etc., and is provided with ample exits to open on three sides.

The square form of the building makes it possible to reverse the plan as shown and secure the Masonic entrance on Lafayette Avenue, if that were considered more important than the proper orientation of the lodge rooms.

Lodge Room Floor. — This floor has been planned to obtain within the smallest possible floor area the requirements as to arrangement, size, etc., of the two lodge rooms together with their accessories and a central service, and an ample vestibule and stair system.

The height of the lodge rooms makes a well proportioned room and allows for a mezzanine floor above vestibule, reception rooms, tyler's and preparation rooms, and over service corridor.

To those who have suffered from a smoky fireplace we would recommend the perusal of Benjamin Franklin's remarkable treatise on "How to Cure Smoky Chimneys." We do not always appreciate the scope of the genius of our first American statesman. He established the first post office; he first drew lightning from the skies; he wrote papers and scientific treatises which are classics to-day; and he, more than any other man of his time, molded the destinies of our Republic. He played with the mightiest questions of state, but was not too preoccupied to consider how to make a bad fireplace better, and we have not yet been able to devise any particular improvement on his methods.

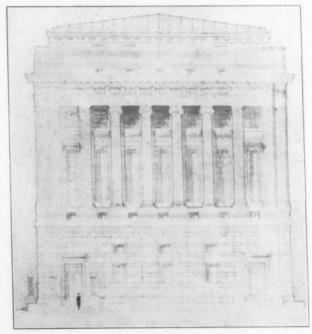
Editorial Comment and Selected Miscellany

ARCHITECTURAL FAIENCE COMPETITION A.
GARDEN WALL FOUNTAIN.

MR. C. HOWARD WALKER, who judged the Competition held by The Brickbuilder for a Garden Wall Fountain, to be executed in colored faience, has awarded the First Prize (\$50.00) to the design submitted by Gordon B. Pike and William L. Welton of New York City. Several of the designs submitted in the Competition, including the prize design, will be published in The Brickbuilder for August.

MODERN CHANGES.

In 1888 the first steel skeleton building was erected in New York City, a structure known as the Tower Building, designed by Bradford L. Gilbert. This is now about to be torn down to make way for a large office building of twenty stories, and the fact that though in perfectly good structural condition to-day and only seventeen years old it should be so torn down to make way for improvements is a striking illustration at once of the changes which have been made possible by steel construction as applied to building, and also of the



Elevation on Lafayette Avenue.

SUCCESSFUL COMPETITIVE DESIGN FOR MASONIC TEMPLE,

BROOKLYN, N. Y.

Lord & Hewlett, Architects.

changes that have come about in the economic conditions resulting from the possibilities involved in piling up the commercial structure to twenty or more stories. The steel skeleton has revolutionized our bases for estimating the values of real estate. Chicago claims the very earliest example of a complete steel skeleton building in the

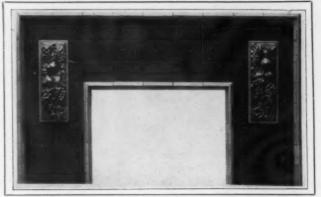


BRANCH TELEPHONE BUILDING, MILWAUKEE, WIS. Herman J. Esser, Architect.

Home Life Building, which was erected by Mr. Jenney; but any architect who, after arriving at years of maturity, made his first attempt in steel construction without other tangible examples immediately around him, can well appreciate the structural courage required to adopt such a building device. All the predictions which were so freely made by the conservatives in regard to steel construction have been proven to be unfounded. So far as



BRANCH TELEPHONE BUILDING, MILWAUKEE, WIS.
Herman J. Esser, Architect.



MANTEL IN COLORED MATT GLAZE FAIENCE.

Made by the Rookwood Pottery Co.

we know there has not been a case of a wall which has ever shown the slightest effect of unequal expansion between the masonry and the steel, the chief bugbear of the earlier structures; and the wind strains which have been at times represented as being so dangerous, and against which such excessive precautions were taken, have, as far as we can ascertain, never yet put in an appearance. In the early days we were oracularly told that the elevator-carrying capacity was the limiting factor in the height. If such limits exist we have not yet reached them, and there is not the slightest structural or mechanical reason why we should not build to one hundred stories or more if we wish. The economic effects of this enormous increase in possibilities of land im-



BRANCH TELEPHONE BUILDING, MILWAUKEE, WIS. Herman J. Esser, Architect.



THE NEW HIPPODROME BUILDING, NEW YORK CITY.

Architectural Terra Cotta furnished by the Atlantic Terra Cotta Co.

provement have completely transformed New York and are in process of transforming the business centers of all our large cities, though nowhere have the restrictions been so slight in regard to height and area as in the metropolis. Less than twenty years has witnessed all this tremendous development, and the end is not yet. It is perfectly safe to predict that the next quarter century is likely to witness even greater changes in many details of our commercial architecture.

CEMENT MORTAR.

A GOOD deal of misapprehension prevails, especially among the older builders, regarding the exact meaning of the designation "cement mortar." In the days before Portland cement was plentiful, cheap and of fine quality, when Rosendale was the most approved American brand, and cement could be used at the best but sparingly, mortar in the abstract always meant a mixture of lime and sand. When for constructive purposes a somewhat greater strength was desired, a pro-



UNIQUE TREATMENT OF A CORNER LOT.

portion of cement was added rarely exceeding the bulk of the lime, making a mortar which was popularly designated as half and half, or as cement mortar. Of recent years, however, the meaning of this phraseology has been changed. Those who have given careful study to cement have restricted the designation of cement mortar to a mixture of sand and cement only, so that, as accepted by the best engineers to-day, the term can not strictly be applied to any mixture which contains even a slight proportion of lime. Many of the older builders continue to consider cement mortar as a mixture of the three materials, but it is hardly any longer properly so considered.

As cement mortar began to crowd out lime, mechanics discovered that cement and sand could not be used for mortar in exactly the same way and with exactly the same facility to which they had been accustomed in the mixture of cement and lime. Many masons still aver that it is impossible properly to lay up bricks in pure cement mortar. It is, however, very far from being really impossible, and as a matter



INTERIOR OF RAILWAY STATION, MINNEAPOLIS.

Charles S. Frost, Architect.

Showing Tiffany Enameled Brick in combination with regular face brick.

of fact the cost of laying up bricks with pure cement, by men who are used to handling the mixture, is but very little more than if the bricks are laid up with mortar composed partly of lime. At the same time there are certain advantages for ordinary mason work in using a slight admixture of lime. The resulting mortar is more plastic and will retain its water more completely, so that the brick work is less liable to be stained by the cement running down the outside of the wall than would be the case if pure cement were used. The danger, however, is in allowing mechanics discretion in such use of lime. One part in bulk of lime to four parts of cement is the utmost that is necessary to obtain a tenacious, self-contained mortar, and any



DETAIL BY RANKIN, KELLOGG & CRANE, ARCHITECTS.

New York Architectural Terra Cotta Co., Makers, made under the eye of the architect rather than to the mixture bought more or less at hazard in this way, and certainly the only essential reason for adding lime at all in mortar for brickwork subjected to severe strains would be to prevent discoloration on the exterior.

SAND LIME BRICK.

THE Sand Lime Brick Company secures a fresh crop of victims each year. If we are incorrect in using the word "victim" we should be glad to be set right. So far



DETAIL BY NEW JERSEY TERRA COTTA CO.



EMPIRE BANK BUILDING, CLARKSBURG, W. VA. Fireproofed by the National Fireproofing Co.

lime added beyond that amount is simply adulteration. Some cement makers have gone so far as to put on the market a barreled product containing a known proportion of slacked lime and of cement. We should, however, prefer to trust to the mixture

magnesia, cement compounds and mixtures of wood pulp as a base have all put in appearance, without, however, in the slightest degree affecting the sales of burnt clay. It would be idle to say that nothing better

the best samples of lime bricks which have come to our notice were made in Germany, and we do not know of any factory in this country which has been able to manufacture and market sand lime bricks of first-class quality as to endurance, hardness and absorption; and yet every little while we see a notice of a new company being formed to exploit this fascinating material, and in a recent issue of one of the English papers a Canadian cousin writes very enthusiastically about the new plant in which he is interested, which is to revolutionize the brick industry and throw burnt clay into oblivion. If any of our readers have had any experience with American-made sand bricks we should be glad to hear from them. There are perennial substitutes offered for burnt clay; infusorial earth, asbestos sand,



DETAIL BY VONNEGUT & BOHN, ARCHITECTS.
Indianapolis Terra Cotta Co., Makers.



DETAIL BY HAMME & LEHER, ARCHITECTS.

Conklin-Armstrong Terra Cotta Co., Makers.

could be imagined, but the better has not yet made its commerical appearance.

NEW BOOKS.

Building Materials. Their Nature, Properties and Manufacture. By G. A. T. Middleton, A. R. I. B. A. Large crown 8vo, linen. Price \$4.00. New York: W. T. Comstock.

The book takes up the subject in detail, starting in the first chapter with the origin of sand, slate, marble, stone, etc. The subsequent chapters give these various materials and their adaptability to different purposes.

The author has spent a large amount of time in collecting material and valuable data on the subject. The result of this has been to place before the reader much practical information. A very full and exhaustive index has been prepared for ready reference. The book contains four

hundred and twenty pages, with over two hundred illustrations from special drawings and photographs.

IN GENERAL.

Clinton & Russell were the architects of the Beaver Building, New York City, illustrated in The BRICK-BUILDER for June, and not Cass Gilbert, as stated.



HOFFMAN APARTMENTS, GRAND RAPIDS, MICH.
F. P. Allen & Son, Architects.
Brick furnished by Columbus Brick and Terra Cotta Co.
F. H. McDonald, Agent.



HALE & KILBURN BUILDING, PHILADELPHIA.

Architectural Terra Cotta made by Excelsion Terra Cotta Co.

The business of John Parkinson, architect, will hereafter be conducted under the firm name of John Parkinson and Edwin Bergstrom, offices 1215 Braly Building, Los Angeles, Cal.

Ballantyne & Evans, architects, New York City, have dissolved partnership. Mr. Ballantyne will continue the practice of architecture, while Mr. Evans will devote his time to the practice of civil engineering. Offices of both, 22 Pine Street.

The architects, engineers and draughtsmen of Fort Worth and Dallas, Texas, have organized the Southwestern Technical Society for the purpose of advancing the interests of their professions. The following were elected as officers: Charles D. Hill, president; B. Gage Leake,



DETAIL BY W. D. VAN_SICLEN,
ARCHITECT.

Winkle Terra Cotta Co., Makers.

vice-president; Frederick E. Henkel, secretary and treasurer.

Carl F. White, architect, Cleveland, Ohio, has taken offices in the American Trust Building of that city. Manufacturers' catalogues and samples desired.

At the final meeting of the Washington Architectural Club for the season the following officers were elected: Louis A. Simon, president; Albert L. Harris, vice-president; Leo J. Weissenborn, secretary; Warren W. Youngs, treasurer.

On June 13 Frederick V. Murphy, winner of the Second Traveling Scholarship given by the club, sailed



DETAIL BY HOLMBOE & LAFFERTY, ARCHITECTS.

Northwestern Terra Cotta Co., Makers.

for Europe. He will spend several years in study at the Ecole des Beaux Arts and in the ateliers of Paris.

Fiske & Company, Inc., have opened a New York office in the Flatiron Building, for the purpose of conducting a general agency for building brick, terra cotta, tiles and other burnt clay products. J. Parker B. Fiske will have the management of this branch of the company's business.

The Grueby Faience Company has been awarded the contract for the faience to be used in the exterior walls of the Carnegie Technical Schools at Pittsburg, Pa., Palmer & Hornbostel, architects.

The new Frick Building, which is to be built in Pittsburg, will have two of its façades laid up in a mottled



DETAIL BY OTTO BLACK, ARCHITECT. Brick Terra Cotta and Tile Co., Makers.

enameled brick, which will give the building the appearance of having been built of polished granite. The light shafts will also be built of enameled brick. These brick, some six hundred thousand, are being made especially for this building by the American Enameled Brick & Tile Company of New York City. The building, when completed, will command more than the usual attention given to a new building, because of the employment of small units, glazed, for the exterior walls. If the material successfully withstands the assault of smoke and dirt,

for which Pittsburg in particular is noted, it will have achieved a new triumph for glazed clay products.

Americans are sharing in the London building boom. No less than four large modern hotels are



DETAIL BY ST. LOUIS TERRA
COTTA CO.

under construction or contemplated, in addition to a great number of office and warehouse buildings. In connection with this boom British architects and builders are adopting to a considerable extent American methods of steel frame and fireproof construction.

The National Fireproofing Company has been successful in securing a number of contracts for fireproof work in these new buildings, and has recently made a test in London of their patented reinforced terra cotta floor-arch construction. This test was made under the direction of the British Fire Prevention Committee. The fire-resisting floor-arch construction which was tested consisted of hollow tiles of burned clay material, with a metal reinforcement in the form of a wire truss. This arch was supported by steel I beams, spaced at proper distances to sustain safely the superimposed load to be carried.

The requirements of the British Fire Prevention Committee are very rigid, consisting of a fire test of four hours at a temperature of 1700 degrees, after which water is applied to the under side of the arch.

A test of the construction described was made on June 28, and was entirely successful. Hollow tile reinforced floors are absolutely fireproof, and at the same time are much lighter and stronger than other systems heretofore used in London.

WANTED — By an expert Gothic architect, experienced in ecclesiastical work and superintending, also a good designer in other styles (trained by the late Charles Barry of London, England), a permanent position with a first-class firm of architects. Good English and American references.

Address Simpson, 2811 14th St., Washington, D. C.

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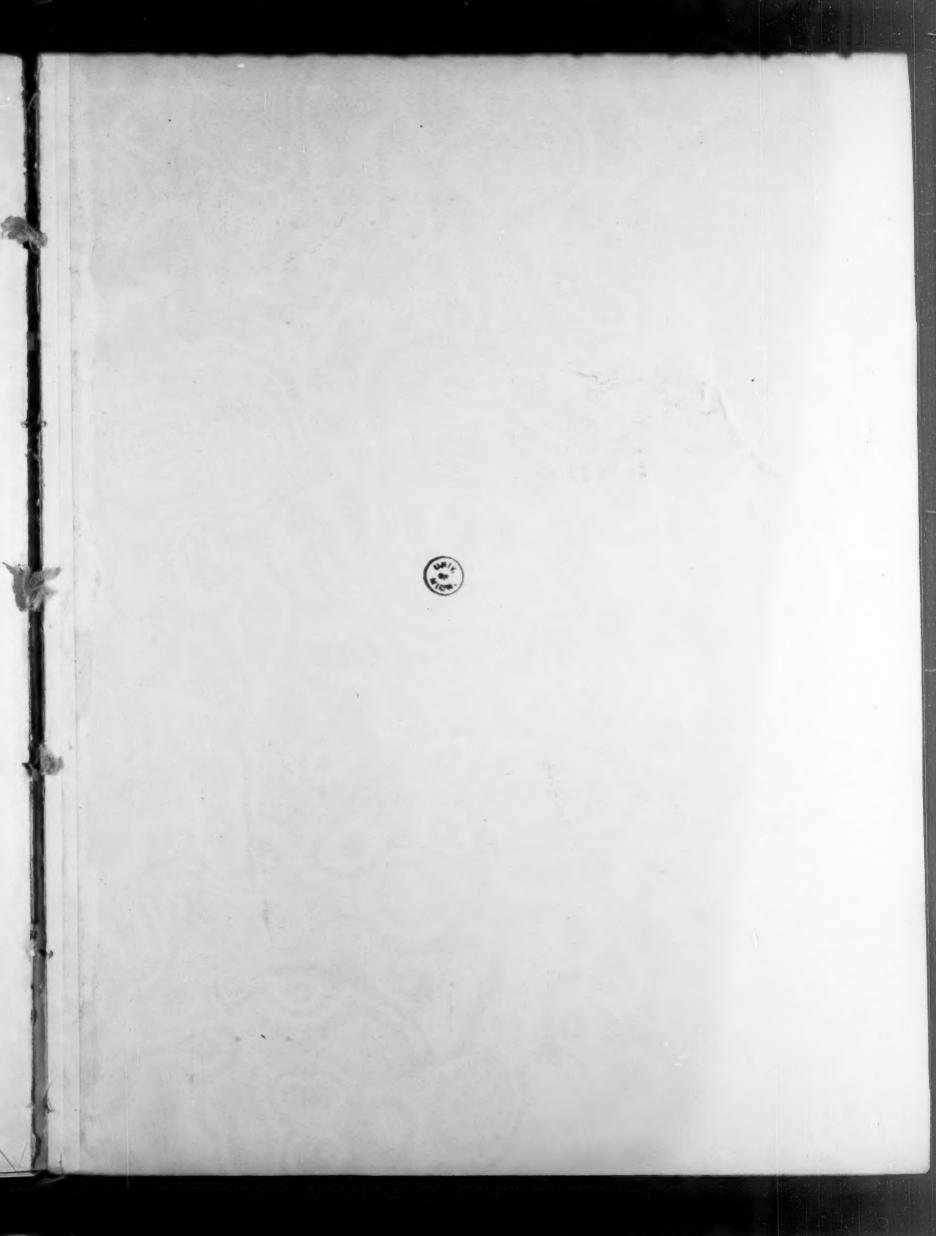
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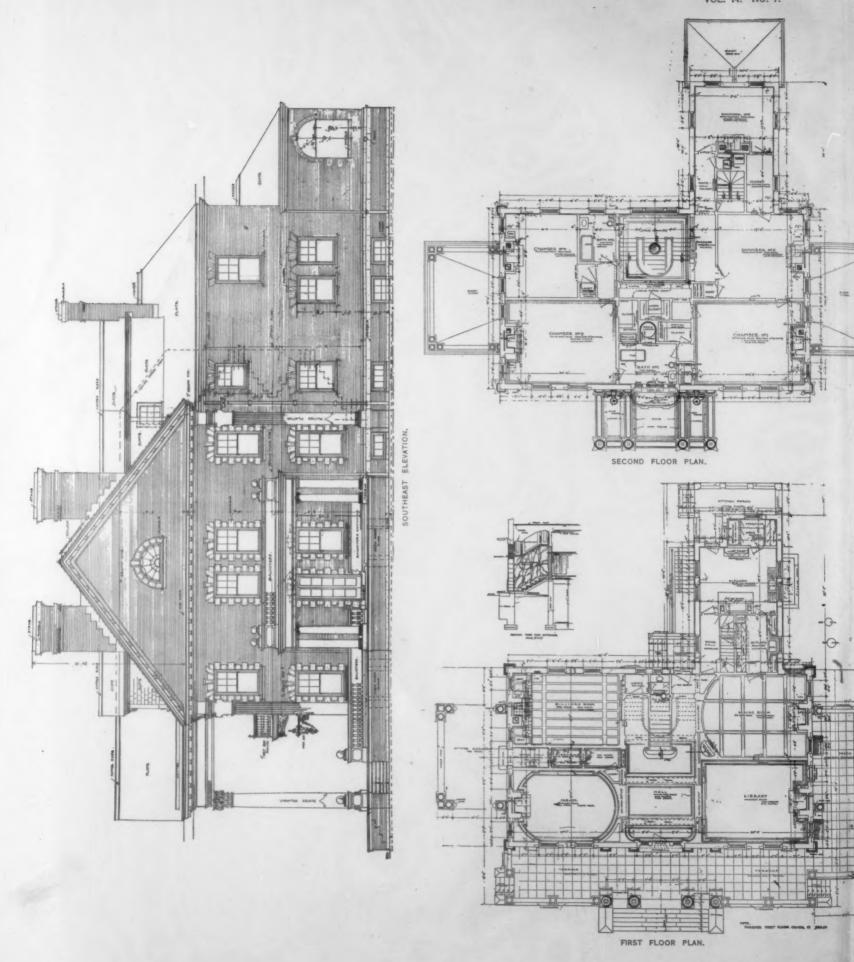
THE UNIVERSITY also grants advanced standing to College graduates; offers a combination of liberal and technical courses whereby the degrees of A B. and B. S. in Architecture can be taken in six years and conducts a Summer School in which architectural studies may be taken.

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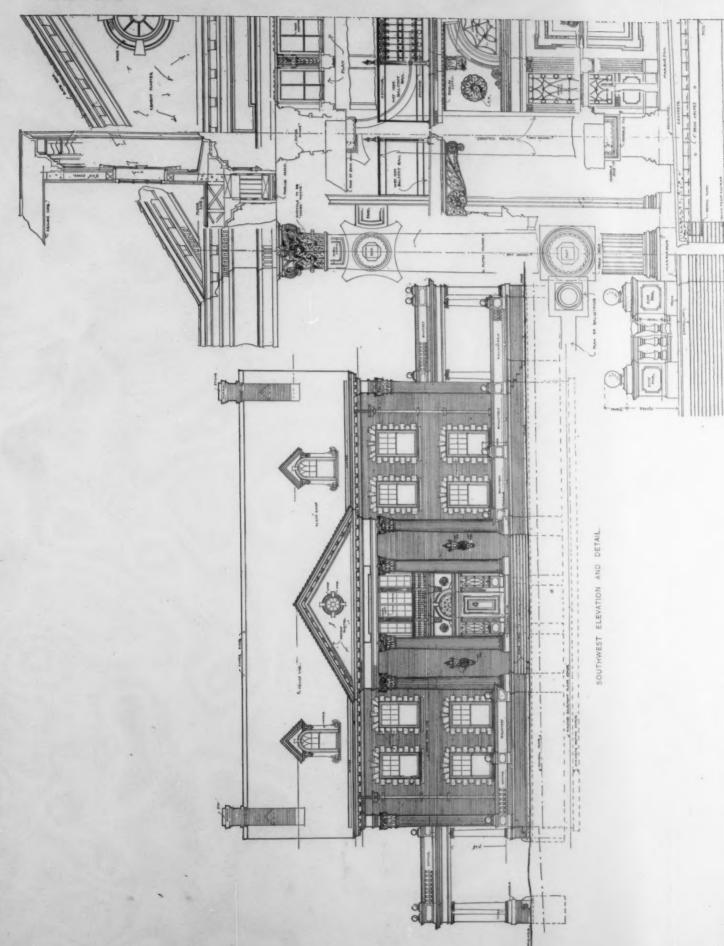
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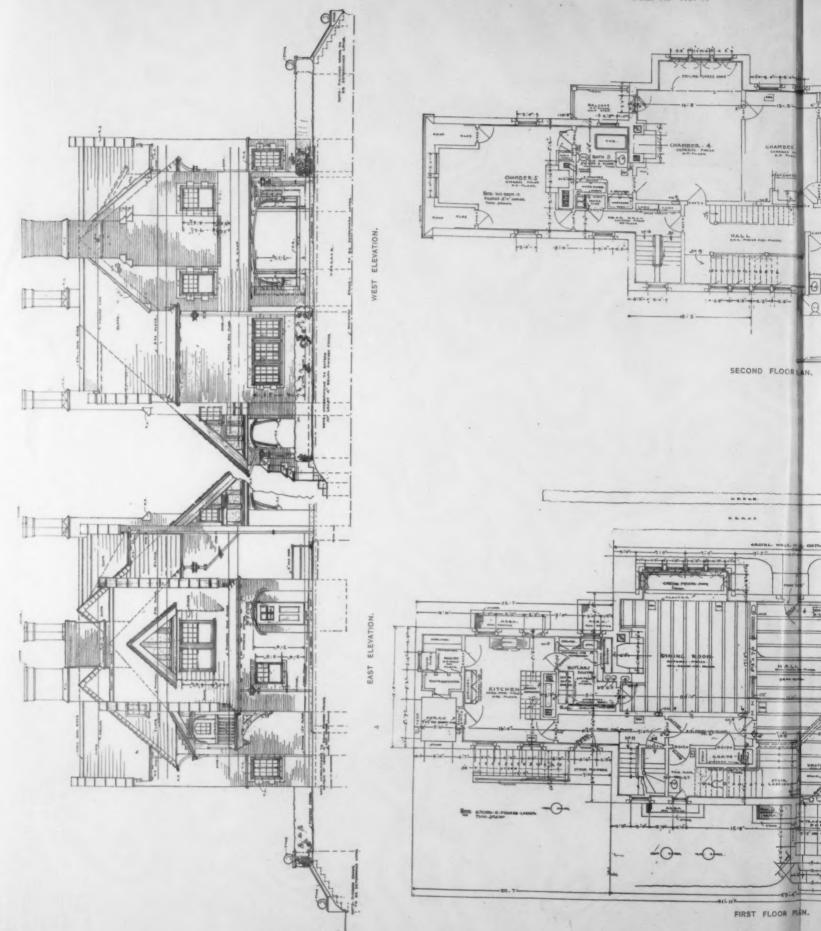


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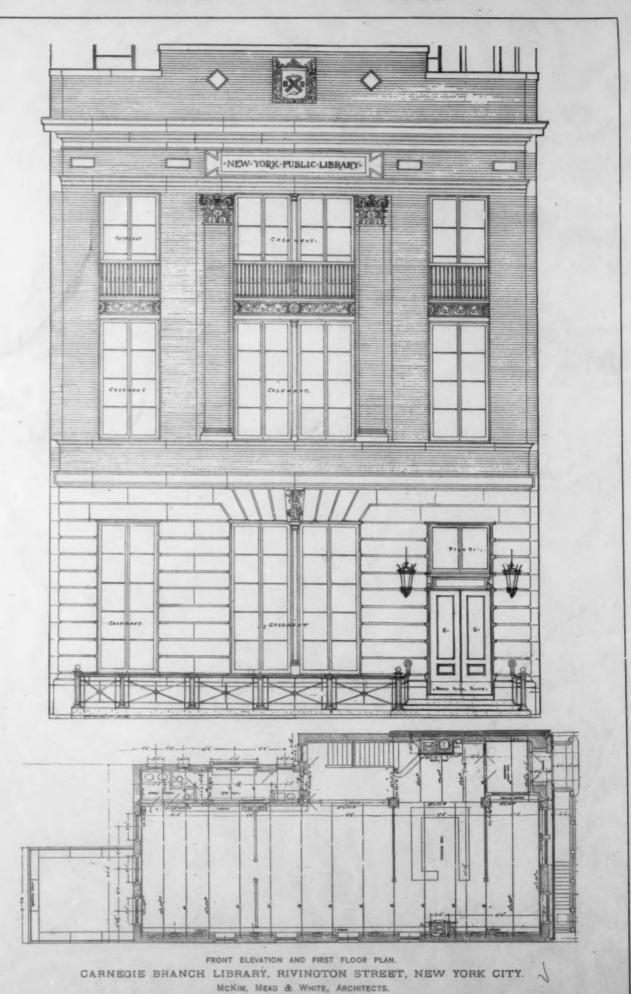


HOUSE FOR D. P. BLACK, ESQ, PITTSBURG, FA.

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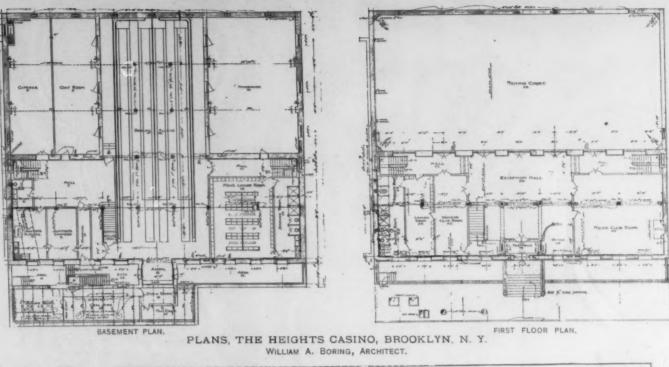
MACCLURE & SPAHR, ARCHITECTS.

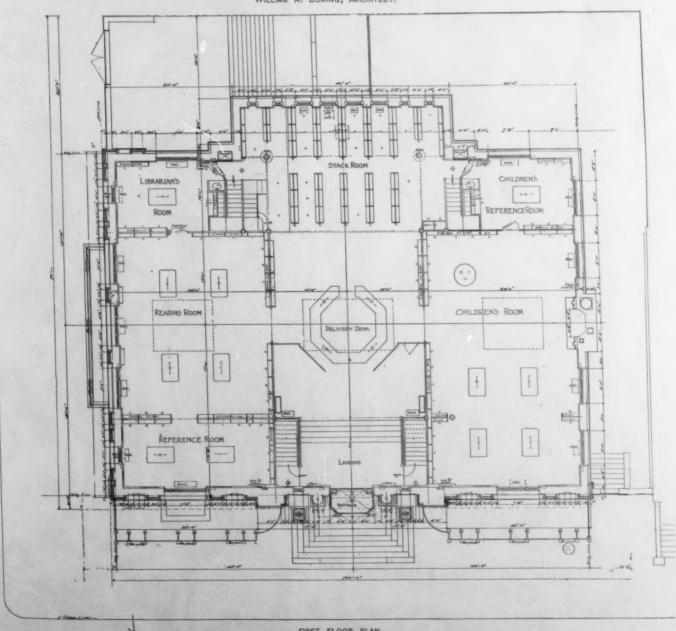


THE BRICKBUILDER.

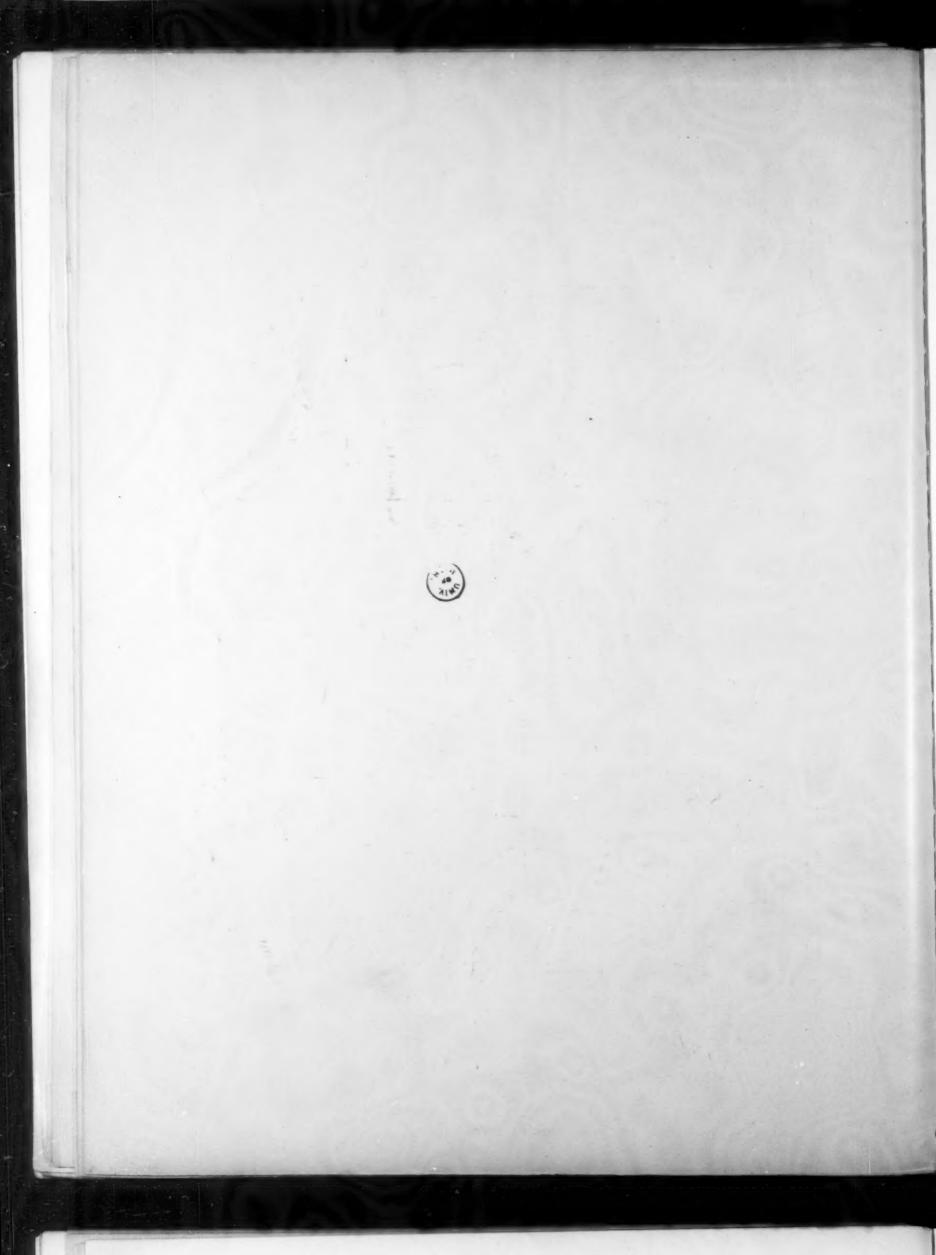
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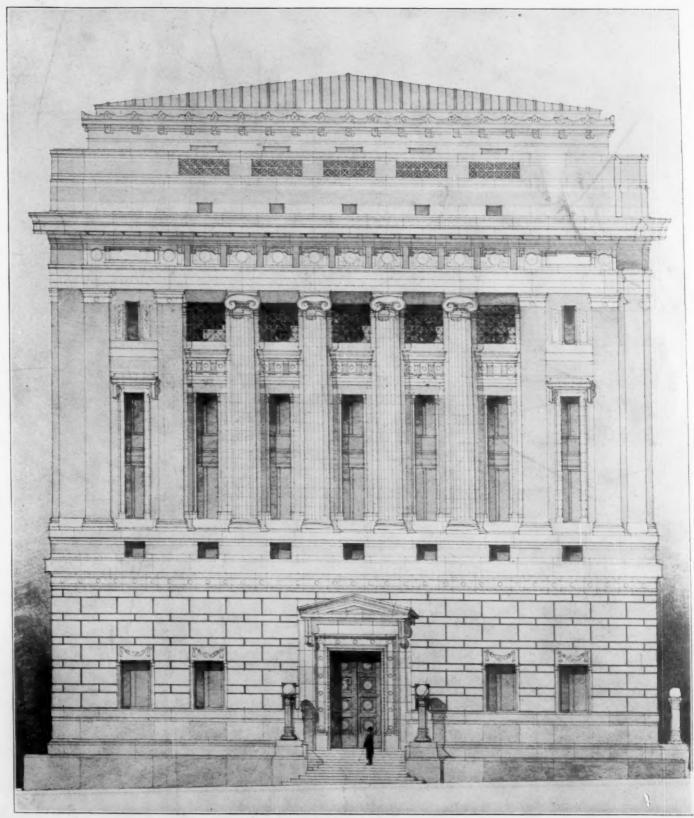
PLATE 56.





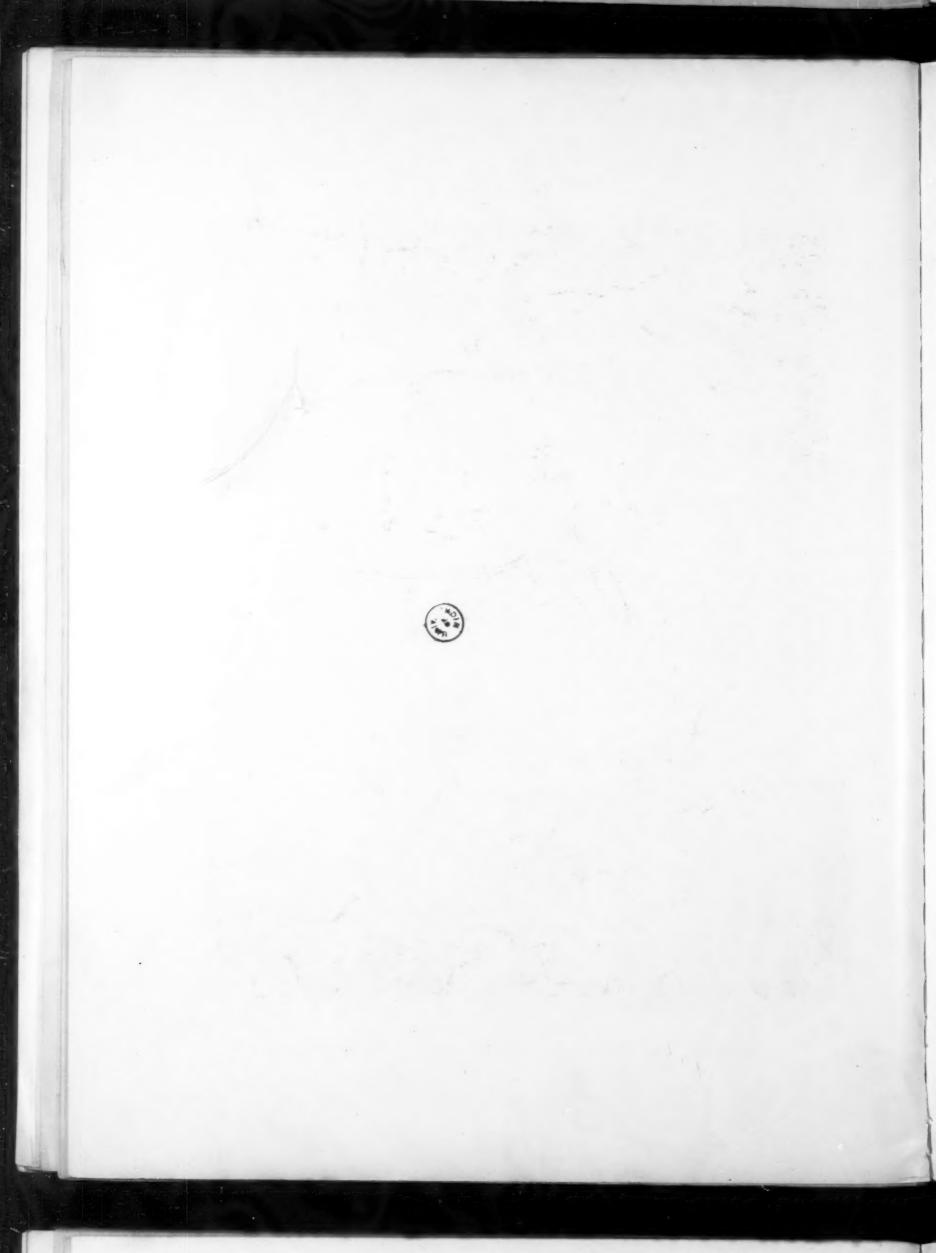
CARNEGIE BRANCH LIBRARY, CLINTON AND UNION STREETS, BROOKLYN, N. Y. WILLIAM B. TUBBY & BROTHER, ARCHITECTS.

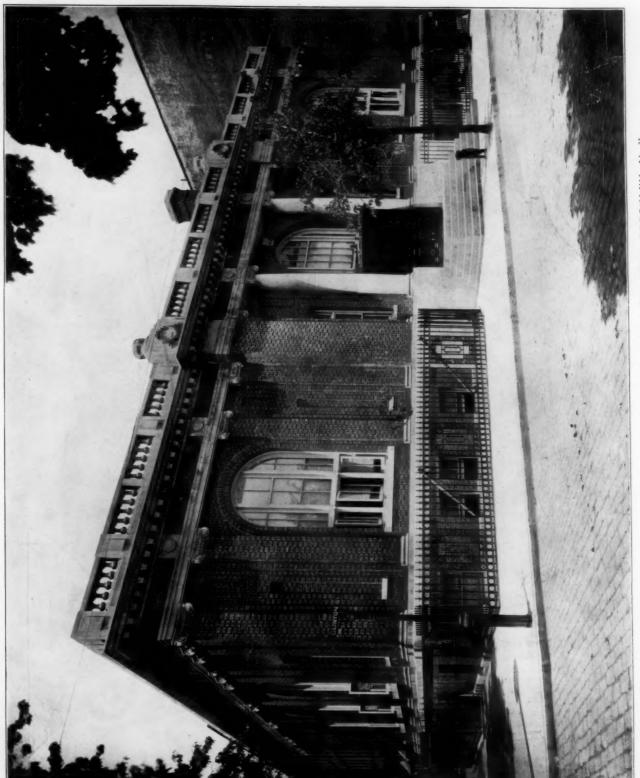




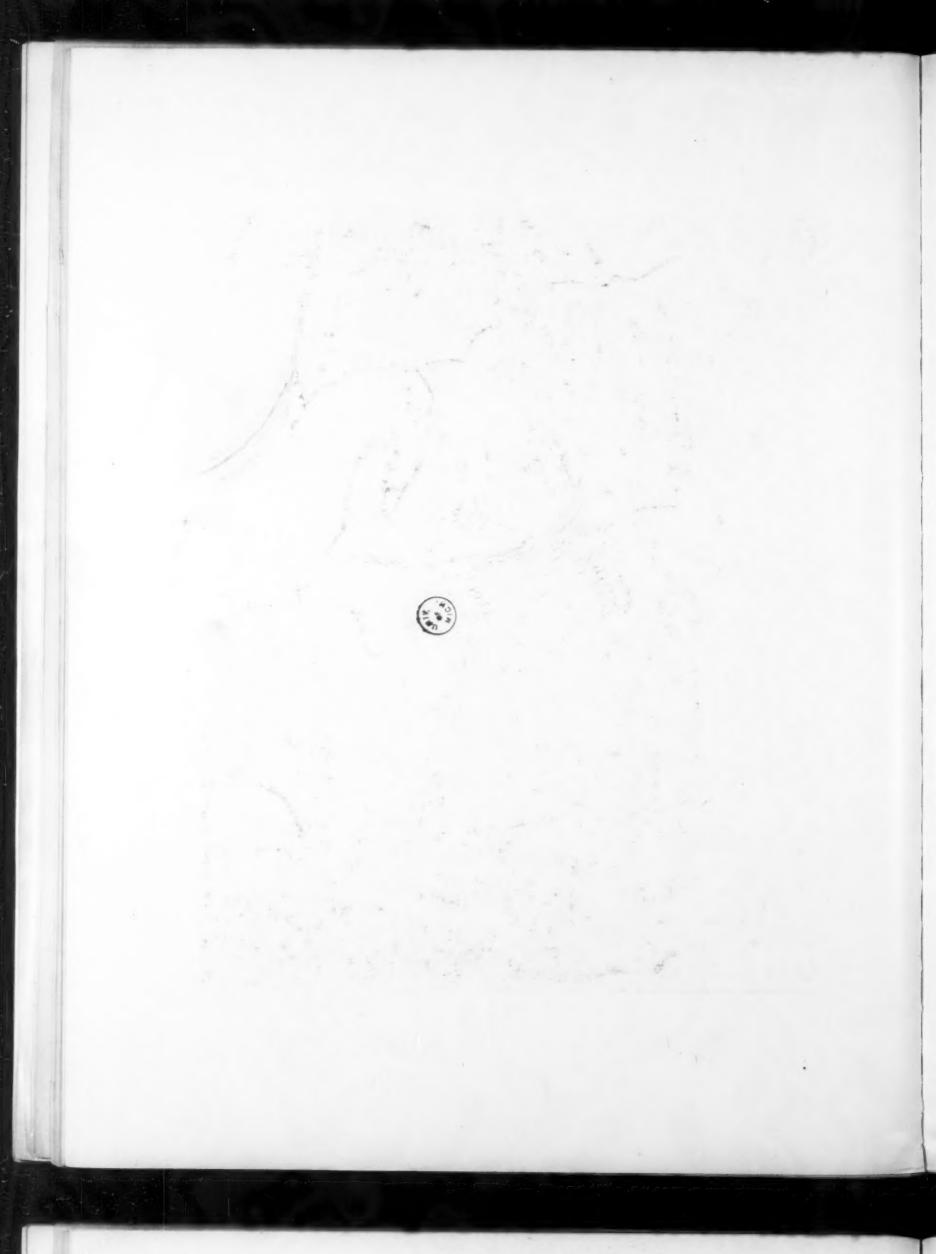
ELEVATION ON CLERMONT AVENUE.

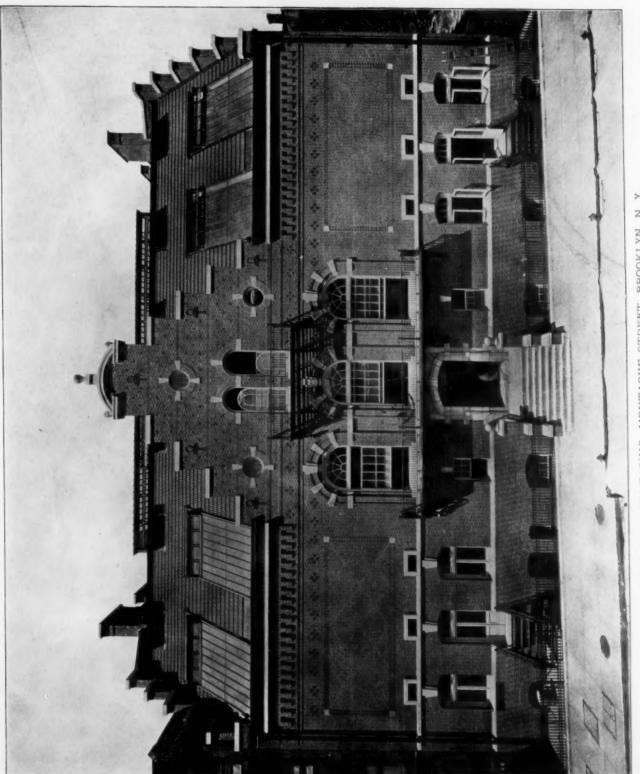
SUCCESSFUL COMPETITIVE DESIGN FOR MASONIC TEMPLE, BROOKLYN, N. Y. LORD & HEWLETT, ARCHITECTS.



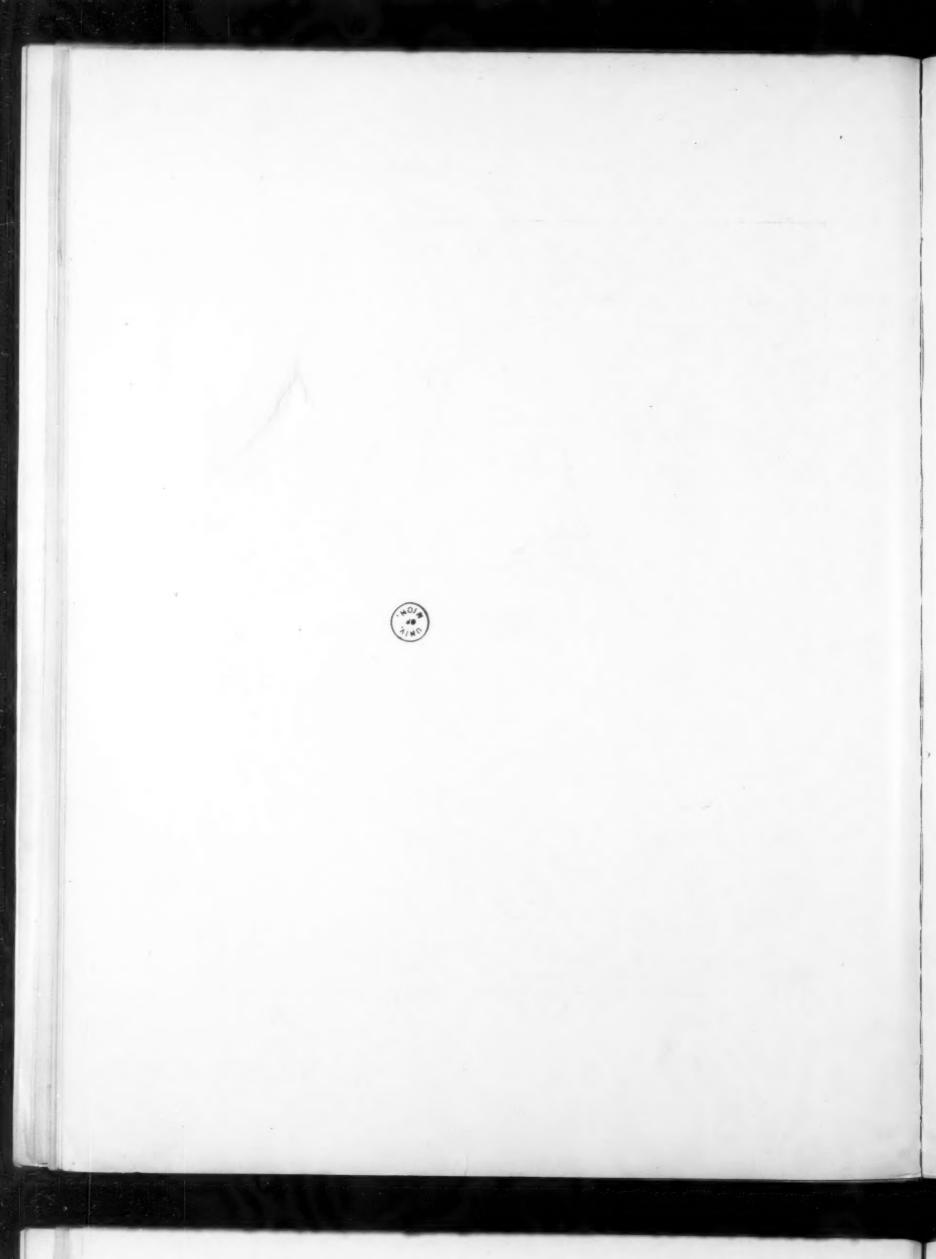


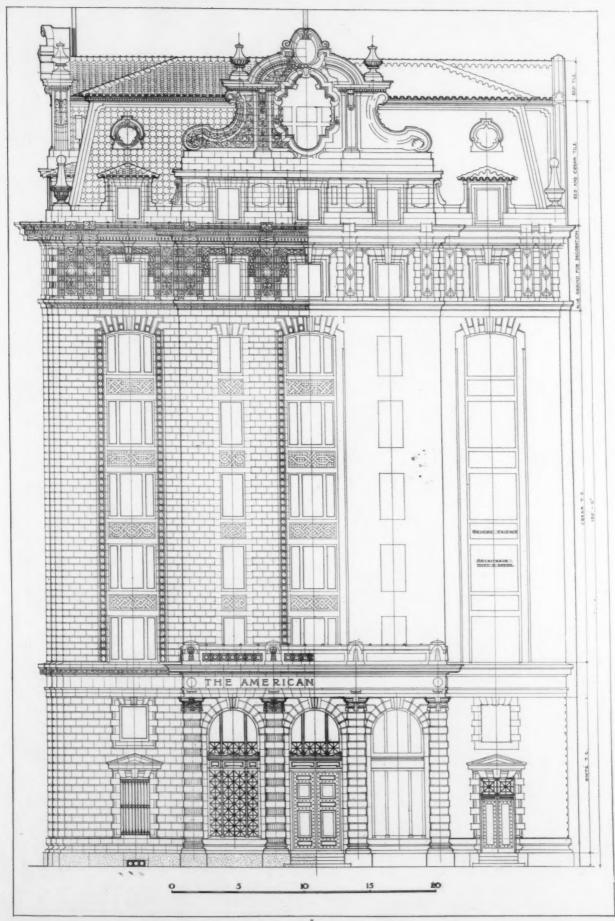
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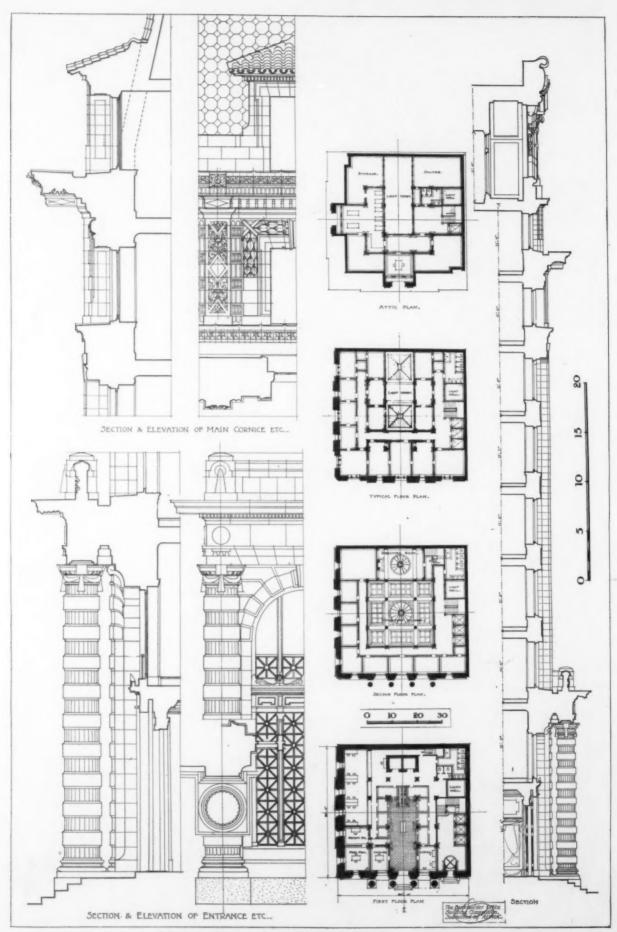


THE HEIGHTS CASINO, MONTAGUE STREET, BROOKLYN, N. Y. WILLIAM A. BORING, ARCHITECT.

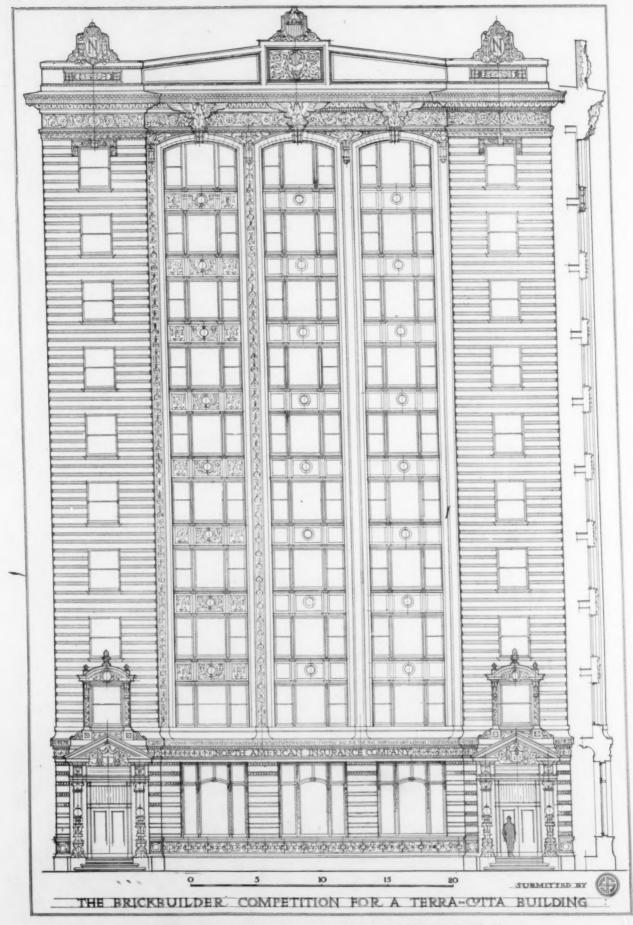




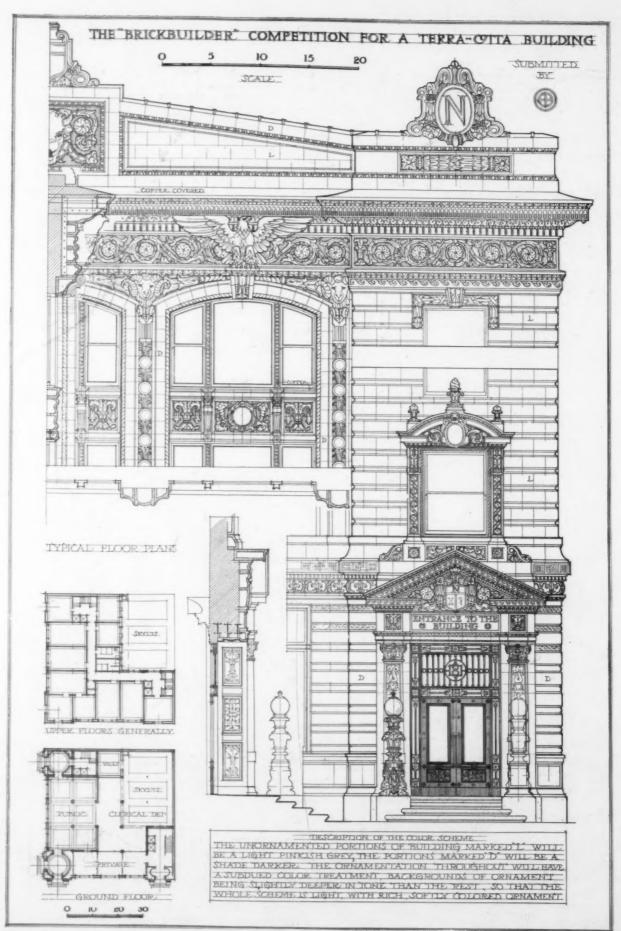
SUBMITTED BY WALTER E. PINKHAM, WASHINGTON, D. C.



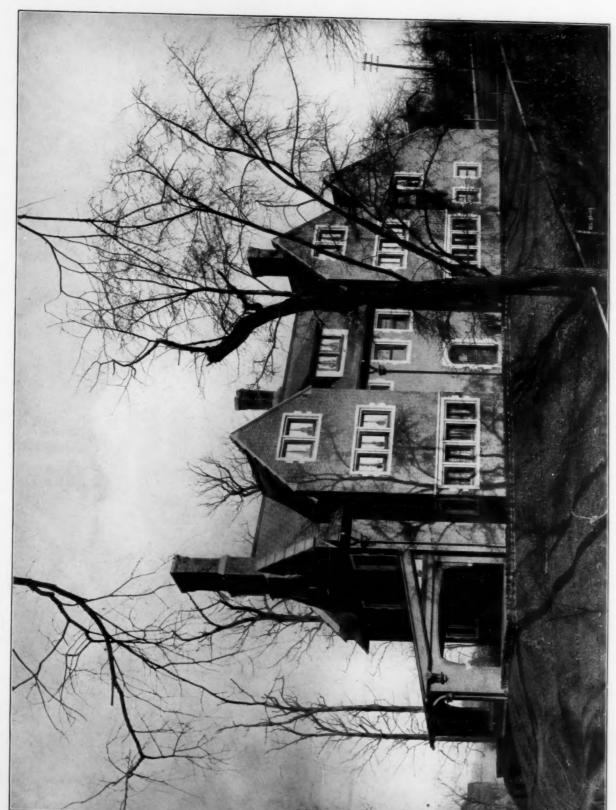
PLANS AND DETAILS BY WALTER E. PINKHAM.



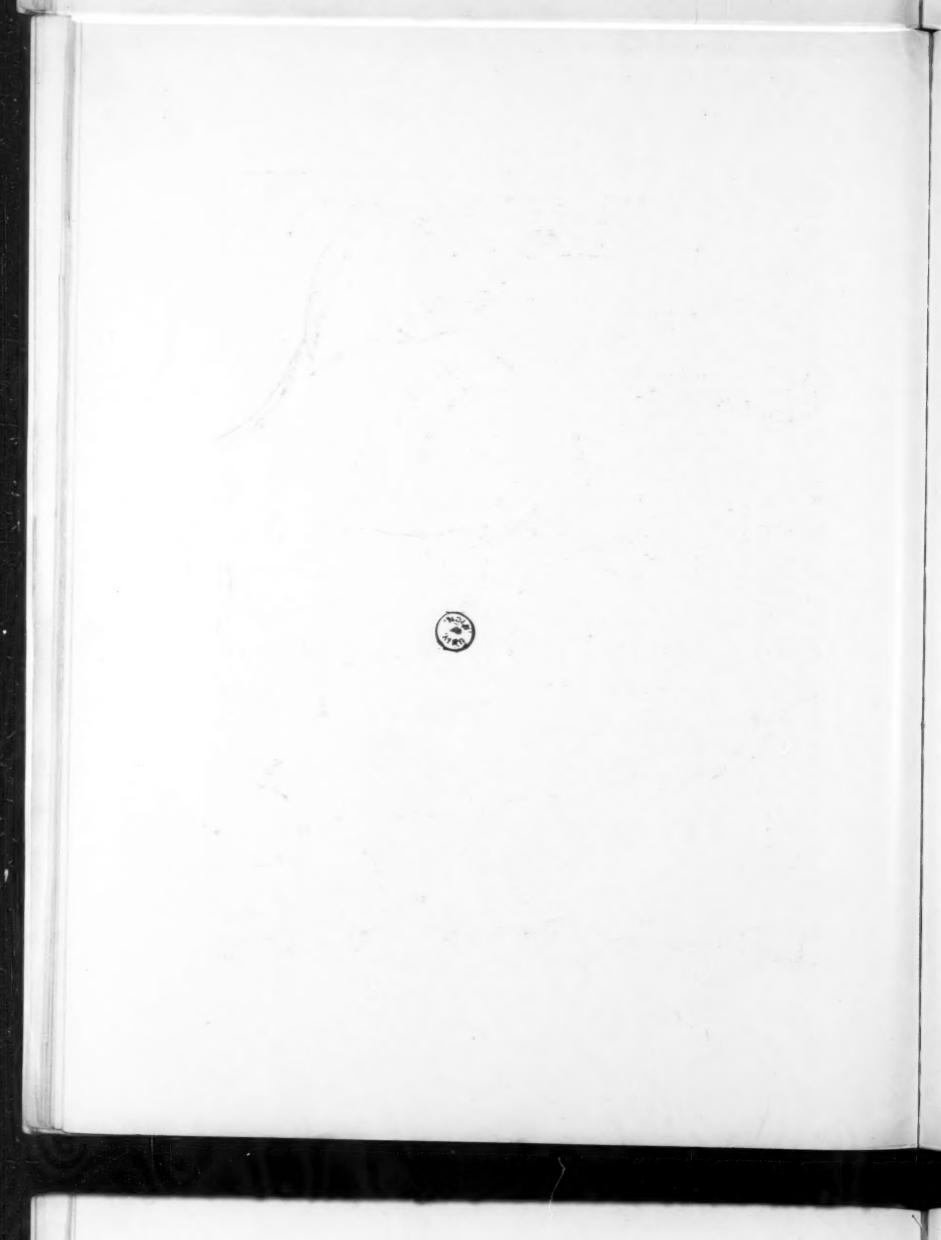
SUBMITTED BY JAMES B. ARNOLD, ROCHESTER, N. Y.



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